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A COMPREHENSIVE STUDY OF WORD FORMATION IN TAMIL

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ABBREVIATIONS FOR GRAMMATICAL TERMS USED

The following are abbreviations for grammatical terms used frequently in the glosses for examples. Other abbreviations are explained as they are presented.

ACC/Acc/acc - Accusative

ADJ/Adj/adj - Adjective

ADV/Adv/adv - Adverb

AGR - Agrement

AUX/Aux - Auxiliary

C – Complement

CL - Clitics

COMP- Complementizer

CONJ/Conj/conj - Conjunction

COND - Conditonal

CP - Case phrase

DAT/Dat/dat - Dative

DEF/Def/def- Definite

DEM/Dem/dem -Demonstrative

DET/Det/det - Determiner

DO - Direct object

- DVN - Deverbal noun
- EMPH/Emph/emph - Emphasis
- ECCL/Excl/excl - Exclamation
- FUT/Fut/fut - Future
- GEN/Gen/gen - Genitive
- IMP/Imp/imp – Imperative
- INF/Inf/inf - Infinitive
- IO - Indirect object
- LOC/Loc/loc - Locative
- N/n - Noun
- NEG/Neg - Negative
- NOM/Nom - Nominative
- NP - Noun phrase
- O/OBJ/obj - Object
- P - Phrase
- PaRP - Past relative participle
- PART - Participle
- PCL - Particle
- PERF - Perfective
- PL - Plural
- PNG - Person-number-gender
- POSP - Postposition
- PPART - Past participle

PREP - Preposition

PRES - Present

QUAN/Qutan/quan – Quantifier

RP- Relative participle

S - Sentence, Subject

SG/sg - Singular

SUBJ - Subject

T - Tense

V - Verb

VN - Verbal noun

VP - Verb phrase

VPART - Verbal participle

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PROLOGUE

A brief sketch of morphology of Tamil

Tamil, morphologically speaking, is primarily agglutinating, and suffixal. In other words, inflections are marked by suffixes attached to a lexical base, which may be augmented by derivational suffixes. The traditional treaties on Tamil grammar define a distinction through free forms (the major grammatical classes), and bound forms (items like particles, and clitics). Tolkappiyam recognizes Tamil as constituting two major word classes: nouns, termed *peyarccol* and verbs, termed *vinaiccol*. As per the classical grammatical treatises, and as recorded in Pope (1985), each of these are characterized by a narrow set of features, all of which are necessarily morphological.

The characterization of the major grammatical categories of Tamil by Pope (1985) is worth mentioned here. According to Pope nouns are characterized by four features: class, division, person and case. There are two kinds of classes, rational and irrational. There are five divisions, masculine, feminine, rational-plural, irrational-singular, and irrational-plural; the three divisions, masculine and feminine and irrational-singular are called singular number; the two other divisions are called plural number. There are three persons: the first, second, and the third. Cases are eight in number: nominative, accusative, sociative, dative, ablative, instrumental and locative.

According to Pope the verb consists of the following things: root, personal terminations, three persons, five divisions, tenses, imperative mood, optative mood, two particles, negative form, and verbal noun. The root of a verb is the indivisible part which stands first. That part of a verb which stands at the end and shows the class, division, and person of its subject is its personal termination. There are three tenses: past, present, and future. These are generally indicated by a medial particle between the root and the personal termination. The imperative is used only in the second person, and in the singualr its form is that of the simple verbal root. By the addition of *um* alone, or of *um* with *kaL*, the plural is formed. The optative is that form of the verb, which is used with a subject of any of the two classes, five divisions, and three persons, to express a 'wish' or 'polite command'. A participle is a defective (or dependent) verbal form. There are two kinds of participles: adverbial participle and adjectival participles. A negative mood is recognized as indicated by those forms of the verb which deny an action. Combining the personal ending and the root without any medial particle forms the negative finite verb common to the three tenses. A verbal noun is a noun formed by adding *tal*, *al* or *kai* to the root of a verb.

Adjectives and adverb in Tamil are syntactically recognized category. They are not decided by the type of inflection they receive; rather they are identified by their function in the sentential construction.

A brief note on word and its formation

We are concerned here on the formation of words, and more particularly with notion of stems. Traditionally, the lexicon is thought of as a (more or less structured) list of the form-meaning correspondences (or signs) which speakers have made conventional. With only marginal exceptions, these associations are arbitrary: even onomatopoeic words are arbitrary, at least in part. The fact that *kaatu* 'ear' in Tamil means what it does and functions as a noun does not follow from any general property of the language. Lexicon should not be looked at as a list of words focusing on the unpredictability of the form-meaning associations. It should be able to connect the net work of relations existing between words.

There would be little to study in the domain of word formation principles if all of the items in the lexicon were arbitrary like *kaatu* 'ear' – arbitrary associations between a form and its meaning, where neither has internal structure that is relevant to the existence of the association. Besides such unanalyzable case, however, other items in the lexicon (perhaps mojority) can be seen as 'particularly motivated', in the sense that they involve (individually arbitrary) isolable parts combined in principled ways. Consider for example, the word *iiTTiya viTuppu* 'earned leave. It is not enough to list an association between the phonological sequence /*iiTTiya viTuppu* / and the meaning 'earned leave'. We must relate the first part of the form to the independent word *iiTTiya* (and thus eventually to the verb *iiTTu* 'to earn'. This is not simple because of the resemblance in sound an meaning. Somewhere in the lexicon can be found the information *yaroo viTuppai iiTTinaan*means 'someone earned leave'. What interests us is the sort of principle by which the adjectival form *iiTTiya* 'earned' and the noun *viTuppu* 'leave' are combined to yield the compound noun*iiTTiya viTuppu* 'earned leave'. A number of different processes can be seen at work in this example. *iiTTiya* 'earned' is related to the verb *iiTTu* 'earn' by relativization or adjectivalization by adding tense suffix and relative participle marker *a*. The individual components of the formation can all be seen abundantly elsewhere in the language; but still the existence of a form *iiTTiya viTuppu* is a partially arbitrary fact which must be listed in the lexicon. This is because even though we can say a great deal about how it is formed, given its components, we cannot predict with

certainty that it will be formed. But we don't have a compound *kiTaitta paNam* 'the money which is received'.

The existence of one but not the other is thus an idiosyncratic fact about the word stock of Tamil, where the principle by which either is formed have a generality that goes beyond any particular item in the lexicon. It is in this sense that we can speak of lexical items as 'partially motivated', and about the structure in the lexicon. Distinction has to be drawn between inflection and derivation, the former is intended to bring in syntactic relations between words in a sentence and the later is intended to from new words. The present work aims to capture the formation of words from the already existing ones.

Due to the application of computer in the field of linguistics a new field in applied linguistics is fast developing which has been given the nomenclatures such as computational linguistics and natural language processing (NLP). Computer helps in language parsing, text generation, machine translation and other text-analysis applications. Computer can be used for the analysis of sentences into clauses, clauses into phrases, phrases into words and words into morphemes by parsing techniques and the synthesis in the reverse order is possible. Computational morphology concentrates on the analysis of words into morphemes as well as the synthesis of morphemes into words. Computational morphology can be used in developing teaching tools for studying morphology itself, both from the point of view of language learner and researcher involved in morphological study. Our present venture falls in the second category.

Tamil makes use of mainly the processes of suffixation and compounding to build up its stock of vocabulary. In its present day anxiety to adorn itself to suit the newly found areas of science and technology, it exploits its productive mechanism of coining new words from the existing morphemes and words to the fullest possible extent. Verb happens to become a resource from which Tamil can pail out its nominal formations whenever its existing stock fails to lend a helping hand. For centuries together this technique of formation of nouns from verbs is an ongoing process. The interesting aspect of it is that, in spite of its limited number of verb stock and countable number of suffixes, it still could not

exploit fully this resource and the process of nonce formation and lexicalization of verbal nouns is still going on. This is of great interest for us and it is one of the areas which we are planning to explore further to understand how far the processes of productive formation and lexicalization have been exploited so far and to see the present trends in this operation. We are planning to work on the formation of other all the four major categories or words, nouns, verbs, adjectives, and adverbs, from one another. Computers comes in handy to serve our purpose.

In order to achieve our goal a data bases have been created in foxpro by making use of *kiriyaavin taRkaalatamizh akaraati* (KTTA). For example, a data base of verbs and deverbal nouns have been built and the verb stem and suffixes have been listed as fields. (The structure of the data base is given in the appendix no.) There are 63 fields which consist of the verb stem which occupies the top of the list christened as "root" followed by 62 suffixes. The suffixes are named after the concerned suffixes with certain amount of abbreviations wherever necessary. (The abbreviations are expanded at the foot of the appendix no.). The verbs are marked for the conjugation class to which they belong. Accordingly 7 conjugation classes are identified by the markings, 1, 2, 3, 4, 5, 6, and 7. The meanings of the verbs as well as the lexicalized nouns are also given. The compound verbs are distinguished from the simplex verbs by the mark `#'. The root field is provided with the above information in the order: 1) verb stem, 2) marking for simplex/complex, 3) conjugation class and 4) the core meaning of the verb in English. The lexicalized nouns are marked by `*' given in suffix fields. Programs are written in the foxpro for the purpose of computing and retrieving the relevant statistical information discussed in the chapter no . Similarly relevant data bases are created for other categories of words, with the aim of finding out the word formation processes involved in their formations.The scheme of the study

The first chapter entitled "Theory of word formation" deals about the theory of word formation in general. The ideas such as productivity and lexicalization are also elaborately studied in the chapter. The second chapter entitled "Word classes or Parts of speech" identifies the word classes or parts of speech for Tamil. Here the word classes to be established for Tamil form the light of

analysis of the data of Modern Tamil has been discussed. The third chapter explains the "Types of word formation" in Tamil. The fourth chapter entitled "Formation of nouns" explains in details the formation of nouns from nouns, verbs, adjectives and other grammatical categories. The fifth chapter on "Formation of compound nouns" explores the formation of compound nouns taking into account the traditional and modern views on nominal composition. The sixth chapter entitled "Formation of compound verbs" elaborately studies the formation of compound verbs in Tamil which is a very productive mechanism of forming new verbs form old stock of nouns and verbs. The seventh chapter entitled "Formation of adjectives" depicts the taxonomy of formation of adjectives in Tamil. The eighth chapter entitled "Formation of adverbs" explains the typology of formation of adverbs in Tamil.

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CHAPTER 1
SOME THEORIES OF WORD FORMATION

1. 1. Introduction

Our concern here is with the formation of words, and more particularly with the notion of stems. Traditionally, lexicon is thought of as a (more structured or less structured) list of the form-meaning correspondences (or signs) which speakers have made conventional. There would be little to study in the domain of word formation principles if all of the items in the lexicon were arbitrary associations between a form and its meaning, where neither has internal structure that is relevant to the existence of the associations. Besides such unanalyzable cases, however, other items in the lexicon (perhaps majority) can be seen as 'particularly motivated', in the sense that they involve (individually arbitrary) isolable parts combined in principled ways. Our interest here, however, is not in the productive and syntactically relevant categories of inflection, but rather in the internal structure of the meaningful 'core' of the word. The study of stem formation includes the traditional domain of derivational morphology, but it is not limited to this. The formation of compounds is not always

considered together with deviational morphology, but in Tamil this is an important way of creating new lexical items.

Halle's programmatic remarks (1973) introduced the idea that a separate word formation component should be incorporated into generative grammar. There is not much agreement among the scholars about the theory of word formation and the data which is relevant to the theory construction. There are a number of theories on word formation and it is difficult to deal in details about all these theories as it will occupy a lot of space and not much will be achieved by doing so. There are at least two kinds of views on word-formation which need to be discussed here for the proper understanding of the subject, one is that of Aronoff (1976) who proposes to add a word-formation component to the lexicon of generative grammar and attempts to characterize the notion of word-formation rules (WFRs) and another is that of Bauer (1983) who tries to equate word-formation process with syntactic process of sentence formation or generation. In a number of places Bauer shares Aronoff's viewpoints. Our concern here is not to find out the difference between these two viewpoints, but to integrate them so as to serve our purpose.

The theory of word formation propounded by many including Aronof (1976) and Bauer (1983) in general aims to cater to lexicon with word formation rules. As the dictionaries become unending list of words, it became inevitable for us to capture this unending growth of dictionaries by understating the productivity in the formation of lexical items in terms of nonce formation coupled with semantic extension by polysemy. Pustejovsky (1996) views the lexicon as generative. He tries to capture polysemy by means of generative mechanism. We find many lexical items listed in dictionaries as the lexicographers find them idiosyncratic in their formation and/or meaning. But a semantic lexicon should explain these idiosyncrasies, and then only it can severe as a useful tool complementing a grammar. The semantic lexicon, unlike a lexicographer's lexicon should explain the creativity of formation of new words or new meaning from the already existing stock. So it is proposed here to understand the formation of nouns form the already existing lexical items without bothering about the productivity of the concerned word formation rules. The formation

of nouns in Tamil is explained keeping in mind the creative aspect of lexical items.

1.2. Word-formation and its productivity through Arnoff's eyes

Aronoff's theory of word formation is one of the most extensively developed and which make some of the most clearly testable claims about the structure of the lexical component. Under this heading the theory of word formation will be explained through Arnoff's eyes giving as far as possible examples from Tamil.

Word

Morphology is concerned with the internal structure of words. The students of morphology are bothered about the notion of word. The definition for word is a longstanding problem in linguistics. The difficulty in finding a definition is reflected in the morphological theory itself. When it is said that morphology is concerned about the word structure, it does not mean that all the things about the structure of word are encompassed in the domain of Morphology. There is a branch of phonology, termed phonotactics or morpheme structure, which concerns itself with the determination of possible sequence of sounds in a given language. In morphology, words are treated as signs, that is, not just as forms, but also as meaningful forms. It is therefore concerned with words which are not simple signs, but which are made up of more elementary ones. So morphology encompasses two distinct but related matters: (i) the analysis of existing composite words, and (ii) the formation of new composite words. A unified theory of morphology should be capable of dealing with both these areas in a unified and coherent manner, though it may not be possible or even desirable to treat them in exactly the same manner.

Derivation and Inflection

Derivation and inflection are the two types of phenomena recognized traditionally in morphology. Though the distinction between these two phenomena is delicate, and sometimes elusive, it is important. Generally inflection is viewed as encompassing the purely morphological markers, those of tense, aspect, person,

number, gender, case, etc. Derivational morphology is restricted to the domain of lexical category. Aronoff assumes that theory of morphology must not include the premise that morphemes are necessarily meaningful.

Possible and actual word

As syntax, in its modest attempt, aims to enumerate the class of possible sentences of a language, morphology, in its simplest attempt, aims to enumerate the class of possible words of a language. Morphology differs from syntax in the sense that there is a distinction to be made between the classes of possible words and actual words.

Word based morphology

The focus of Aronoff's work is on the process of new word formation. For him word formation rules are used by native speakers create new words. Aronoff (1979:21) makes the following hypothesis while dealing about word-formation: "All regular word-formation process are word-based. A new word is formed by applying a regular rule to a single already existing word. Both the new word and the existing one are members of major lexical categories." He claims that any theory of which this hypothesis is a basic tenant will be called a theory of word-based morphology.

Word formation rules

The regular rules referred to above will be termed Word Formation Rules (WFR). Such a rule specifies a set of words on which it can operate. This set, or any member of this set will be termed the base of the rule. Every WFR specifies a unique phonological operation which is performed on the base. Every WFR specifies a syntactic label and subcategoriztion for the resulting word, as well as a semantic reading for it, which is the function of the reading of the base. It is a fact that all new words are produced by WFRs. WFRs do not operate on anything less than a word, i.e. on morphemes. Aronoff argues that as not all morphemes are meaningful (eg. cran of cranberry, -ceive of conceive, eceive, receive, etc.), morphemes cannot be considered as bases for the operation of WFRs. According to him regular rules can derive meaningful words from

meaningful bases, i.e. words only. He further assumes that the speakers of a language do not apply these rules every time they use the word. They are rules for making up new words that may be added to the speaker's lexicon. They could be considered as once-only rules. They are thus different from rules of the syntax and the phonology that must apply in the derivation of every sentence.

Assumption about lexicon

The word-formation rules are rules for generating words and these words may be stored in the dictionary of a language. The rules are a part of the grammar of a language. Aronoff assumes that these rules are completely separate from the syntactic and phonological rules of the grammar. When a WFR is specified for phonological operation, it is not that the phonological operation is applied independent of WFR, but it is the part of the WFR itself. The same position has to be taken with regard to syntactic and semantic phenomena. A consequence of these assumptions is that each word may be entered in the dictionary as a fully specified separate item. It is assumed by Aronoff that each word in the dictionary entries is not dependent on one another, or on rules. Each one is a complete sign in itself.

Word structure

Almost all words have morphological structure. This fact can be ascertained from the fact that the phonology must have access to both bracketing and boundaries, both of which are morphological matters. It is reasonable to separate the rules for making up new words from those for analyzing existing words, because of the general fact that already existing words tend to be peculiar, and resistant to any system which derives their properties by general rule. This accounts for the similarities between word formation and word analysis. The two matters are same, and yet different. The difference is that while the rules of word-formation are rules for generating forms, the same rules of word analysis can be viewed as redundancy rules. They can be used to segment a word into morphological constituents, though the word may not be strictly generable from these constituents. The proposal that existing morphologically complex words should be analyzed rather than synthesized is of little novelty. Jakendoff (1975) gives an extensive

defense of the use of redundancy rules in morphology. Halle (1973) can be best be interpreted as a system of redundancy rules which extract generalization from a dictionary. But these and similar systems put no external constraint on the notion redundancy. Two coinciding facts, however incidentally, can be reduced to one within Jakendoff's system. In the system proposed by Aronoff the redundancy rules are defined outside the realm, in which they operate: lexicon. In this system only a WFR, which can form a new word, serves as a redundancy rule. This means that the facts, which can account the redundancies or generalization in the analysis of existing words can account the formation of the new ones also.

The analysis of a word begins at its first articulation. The theory can show the possible parts of words as well as individual words. When the analysis does not give us a base of any lexical category, then it receives no label. Take for example the following words:

talaivar (=talai (N) + ar) `head-person'
aaciriyar (= aaciri + ar) `teacher'
kaNavar (= kaNa + ar) 'husband'

The first word has a base which can be assigned to a lexical category (i.e. noun), whereas the second and third do not have a base belonging to specified lexical category. When a word does not have a base of assigned category, then there will be no semantics, whereas when a word does have a base, it is legitimate to ask the relation between the base and the word. This relationship will seldom be one of neat compositionality. Some sort of divergence will usually be seen. This divergence is due to the difference between the actual meaning of the derivative and the expected meaning and not due the difference between the derivative and the base. For example the divergence of paTippu `education' consists in the fact that it does not mean `act of reading'. The divergence is therefore not directly between paTippu `education' and paTi `read', but between the two senses of paTippu `reading/education'. The expected sense of the deviate thus mediates between its actual sense and the actual sense of the base. The intuitive notion of divergence can be handled easily by the proposed theory. Since the analysis outlined so far concerns only to the form of a word, we are not free to give this analyzed form a putative meaning by applying the compositional semantic function of any affixes or may contain

to the base. For example, consider the word paTippu `studies/education'. This can be analyzed as [[paTi]V `study'+ ppu]]N and the meaning can be interpreted approximately as `action of reading/studying' or `event or state of being read'. When this meaning is compared with the meanings of paTippu which we determine from its actual use in the language, it can be found that the one of the approximation will be closer to the actual meaning as it is exemplified in the following sentence.

raataa meel paTippukkaaka amerikkaa ce-nR-aaL
Radha higher study_DAT_ADV America go_PAST_she
`Radha went to America for higher studies'

If a fully developed theory on semantics is available, it is possible to quantify the amount of possible divergence and predict the possible meaning.

Productivity

Productivity is the central mysteries of derivational morphology. It stands on the fact that certain things are more possible than certain other things. Productivity has been widely studied in derivational morphology. There is obviously some intuition about productivity. But most of the discussions are vague. It is sometimes taken for granted that syntax is not concerned with productivity. But it should be noted that certain rules in syntax are more productive than others and that there are operations which are immune to questions of productivity. The obligatory rules cannot be viewed in terms of productivity. On the other hand productivity play a role in the understanding of word-formation rules as they are always optional.

At first productivity has been measured in sheer number. If one wants to compare the productivity of two WFRs, it has been considered to be enough to list the words formed by the respective process and add them up. Productivity has been associated with the length of the list, the longer the list more productive the WFR. The immediate reaction to this method is that it does not take into account the fact that there are morphological restrictions on the sorts of words one may use as the base of certain WFR. Take for example the suffixes -vu and -ppu in Tamil which form nouns from

verbs, the former is added to the verbs of 2nd conjugation class and the latter is added to the verbs of the 6th and 7th conjugation classes. The restriction on the deverbal noun formation by these suffixes can be accounted by a simple way (see page no. for details). The number of words which could be felt occurring as the output of a given WFR has to be counted along with the number of actually occurring words formed by that rule; the ratio of the two has to be computed; the comparison of the ratios obtained for the suffixes with the same kind of ratio obtained for another WFR will give the range of productivity.

Word formation rules

It is neither interesting nor novel to say that words are derived from words. We have made precise claims about the nature of the rules which generate words, their form, the conditions under which they operate, and their relation to the rest of the grammar. Aronoff makes the basic assumption that "WFRs are rules of the lexicon, and as such operate totally within the lexicon. They are totally separate from the other rules of the grammar, though not from the other components of the grammar. A WFR may make reference to syntactic, semantic and phonological properties of words, but not to syntactic, semantic, or morphological rules. Nor may a WFR refer to those properties of words which are directly associated with these rules, i.e. such properties as syntactic or phonological rule features." WFR cannot introduce rule conditioned properties. WFR and its associated phonological operations are simultaneous, and that as a consequence, words are entered in the lexicon in a fully concrete, specified form. WFRs are different from other rules in the manner and occasion of their use. While syntactic and phonological rules are necessary and essential to the generation of every sentence and it is impossible to speak without using some analogue of the syntax and the phonology, this is not the case with the rules of the morphology. It is the dictionary entries themselves which are the input to the syntax and phonology, and the WFRs are merely rules for adding to and, derivatively analyzing these entries. So we can talk about a sentence without taking into account WFRs. It does not mean that WFRs are formally different from others; it does suggest that the two categories are quite separate.

We must know two things for every WFR. The first is that we must know what sort of information a WFR has access to, and how it has access to this information. Every WFR has access to its base, i.e. the class of words on which it operates and to the information contained in the base. The second sort of thing we must know about is the sort of operations a WFR performs, the sorts of changes it can make, and the formal mechanism by which these changes can best be stated in a general way. Perpendicular to this classification of phenomena are different kinds of information in grammar such as syntactic, semantic, phonological, and morphological. Words contain information of all these types that are most likely to be introduced by WFRs as rules for making new words.

Syntactic and semantic restrictions

The base is always specified syntactically. For example, the rule which attaches the adjective forming suffix -aana operates only on nouns.

azhaku 'beauty' + aana = azhakaana `beautiful'
inimai `sweetness' + aana = inimaiyaana `sweet'

Finer syntactic distinctness as well as sub categorization is also possible. Thus, the suffix -ndar attaches only/preferably to transitive verbs.

ooTTu `drive'+ ndar = ooTTundar `driver'
iyakku `operate' + ndar = iyakkundar `director'
poo 'go' + ndar = *poondar
paci 'feel hungery' + ndar = *pacindar

WFRs may also be sensitive to the selectional restrictions of the base. So, the suffix -ndar is further restricted to verbs which allow human subject. It appears to be a general fact that the syntactic and semantic conditions on the base of a WFR are those of category, subcategory, selection and lexically governed entailment and presupposition.

Output

The most studied aspects of morphology, at least the aspects most studied within the framework of generative grammar, are the relation between the syntax and semantics of the base and that of the output of a WFR, the common properties which the two share, and the ways in which these relations and commonalities can be accounted for. With reference to syntax, every new word must be a member of some major lexical category, the exact category being determined by the WFR which produces the word: -aana produces adjectives and -aaka produces adverbs in Tamil. The output can assume the form of a labeled bracketing in which the syntactic category of both the base and the output are specified and the base is represented by a variable. So, for example, the WFR which attaches -ndar forms nouns from verbs. This can be represented as follows:
[+[X]V+ndar]N

With reference to semantics, the meaning of the output of a WFR will always be a function of the meaning of the base. This function is the meaning of the WFR itself. The meaning of a WFR is represented traditionally by a paraphrase containing a variable. The agentive occupational suffix -ndar, for example, can be roughly paraphrased as below:

V#ndarN `one who Vs habitually, professionally...'

The words such as anuppundar `sender', peRundar `receiver' and ndaTattundar `conductor' exemplifies this meaning. The paraphrases of this sort could not be taken theoretically significant. A better representation than providing mere paraphrases can be given by a well developed theory of semantics.

Morphological restrictions on the base

Restrictions, which have their basis on morphology can be seen to participate in the word-formation process. The deverbal noun suffix -ppu, for example, is added to the verbal bases that belong to the 6th and 7th conjugational classes.

Verbs Derived nouns
paTi `study' paTippu `education',

ndaTi `act' ndaTippu `acting',
ndaTa `occur' ndaTappu `current'.

Distinction between verbs of Sanskrit and native origin is helpful in finding out the unacceptable -ppu suffixation with verbs of 6th conjugation class; verbs of Sanskrit origin belonging to the 6th conjugation class do not receive -ppu suffix as they are derived from nouns of Sanskrit origin by truncation followed by -i suffixation.

payaNam `travel (N)'> *payaN, payaN + i = payaNi `travel (V)'
virootam `enmity (N)' > *viroot, viroot + i = virooti `antagonize (V)'

Encoding morphological restrictions

By simply listing the conditions on the basis of WFRs given below, we can state morphological restrictions as follows:

X]V-ppu]N

Condition: X belongs to verbs of 6th and 7th conjugation classes and is not equal to verbs of Sanskrit origin.

The listing conditions under a base is not appreciable as many seemingly independent conditions on WFRs can be attributed to other factors. Most negative conditions are the simple result of blocking. Blocking prevents the listing of synonyms in a single stem. An affix, which is productive with a given morphological class, will thus block the attachment of rival affixes to that class.

1.3. Word-formation and its productivity through Bauer's eyes

Under this heading word-formation and its productivity will be viewed through Bauer's eyes and will be explained giving as for as possible examples from Tamil as we are interested in Tamil word-formation. Productivity is an important aspect in the theory of word-formation. We have accepted that word-formation could be productive. Even then the productivity in word-formation is still a matter of dispute. There are many articles and books written on this subject. The dispute is not whether a specific formation is productive or not, but about how far word-formation in general can

be considered productive. Bauer (1983) holds the view that certain processes of word-formation, at least, are productive. It is clear that certain word-formation processes are productive. For example the bound forms -aana and -aaka can be suffixed with nouns to form adjectives and adverbs respectively.

N + aana azhaku `beauty'+ aana = azhakaana `beautiful',
cezhippu 'prosperity' + aana = cezhippaana `prosperous'
N + aaka
inimai `sweetness' + aaka = inimaiyaaka `sweetly',
teLivu `clearness' + aaka = teLivaaka `clearly'

It is the productivity of word formation that is responsible for the existence of huge vocabulary of Tamil. Tamil newspapers and magazines are using new formations; we can see this tendency in newspaper headings and in advertisements. So the theory, which deals with word-formation, should explain about productivity in word-formation. As productivity of word-formation is the major factor in providing the huge vocabulary of a language, the theory of word-formation has to explain the productivity of word-formation. He distinguishes productivity from creativity.

Productivity and creativity

Productivity is one of the features that can be used to define the human language. This feature is responsible for the production of infinite number of sentences by a speaker of a language. It is expected that productivity should be accounted in the grammar by rules. Creativity is different from productivity in the sense that it is the native speaker's ability to extend the language system in a motivated but unpredictable (not rule governed) way. Take for example the compound veTTukatti which denotes `an instrument meant for cutting'. But if it is used as a metaphor to denote `a person indulging in fighting', then it is a matter of creativity. The word katti `knife' does not carry the meaning `a person of fighting tendency' and it is not possible to predict that veTTukatti can be used to denote a person of fighting tendency and that it would be extended to mean so. But the innovations governed by rules are productive formations. Creativity cannot be placed under any worthwhile generalization although it is possible to give taxonomy of types of creativity.

Productivity with reference to synchrony and diachrony

While talking about productivity it is possible to confuse between synchronic and diachronic aspects of it. The productivity in word-formation is considered to mean the invention of new lexemes that form the part of a language. The information that a particular form is used by so and so during so and so period is a matter of diachrony. There are many new forms that fail to get established in a language. Even then they are formed by specific rules like those forms, which later become established. A speaker can form new words in the same way they form new sentences. In a synchronic grammar there must be rules in the language system that allow the formation of nonce words. The future of these nonce words, which are formed by the rules to fill up the need, is a matter of diachrony. These facts are relevant for the discussion on backformation. The formation of new words from complex words by the deletion of a suffix or suffix-like element is called backformation. The formation of the verb edit from editor is an example for backformation. It seems that there is no typical instance of backformation in Tamil, though there are formations which resemble backformation. For example, the formation of the verb payaNi `travel' involves truncation of the noun payaNam `travel' by the deletion of -am followed by the addition of verbalizer -i. Those who wants to explain the above mentioned formation from the synchronic point of view forgetting about the diachronic facts can say that payaNi is a verb from which the deverbal noun payaNam is derived by the deletion of -i followed by the addition of -am.

Syntactic and morphological productivity

There are scholars who think that there is no fundamental difference between syntactic process and derivative process. But there are scholars who think, on the other hand, that neologism are not formed by separate rules independent of concrete construction. Taking these two conflicting views into account, it is better to see how far morphological productivity is identical to or similar to syntactic productivity. If they are identical, we have to consider word-formation as part of syntax. If there is nothing common between them, we have to assume that word-formation is nothing to do with syntax. There are at least three statements which are

made in generative syntax about the productivity in sentences (Bauer,1984:66).

1. The speakers of a language can produce and understand new sentences of that language.
2. There is no such thing as the longest sentence of a natural language.
3. The statistical probability that any given utterance has been heard/produced by the speaker-listener is almost zero.

How far the above three statements are suitable to word-formation will be discussed below.

Formation of new forms

If we glance through any etymological dictionary one can clearly see the diachronic fact of production of new forms. Newspapers, periodicals and science books in Tamil can give us good source of contemporary material. It is claimed that when word-formation is said to be productive, it is often understood that the native speaker can produce and understand new words. It is in this sense that productivity in sentence formation and productivity in word-formation are identical.

Existence of a longest form in compounding

In Tamil, as it appears, there is nothing like biggest compound. Tamil allows the formation of compounds by adding nouns one after another.

tamizhp palkalaikkazhaka aaTcikkuzhu kuuTTa varalaaRu
Tamil university syndicate meeting history
`the history of the syndicate meetings of Tamil university'

As there is limitation in the formation of long sentence due to memory limitation, there is also limitation in the formation of long word, though theoretically there is no limitation.

viRu viRu ... ndaTai `fast walk'

Existence of longest form in the derivation

It is difficult to say whether there exists a longest derived form in a language. We cannot have a derived word in Tamil in which affixes can be added one after another so as to form a derivative. Though it appears that practically there is limitation in the length of the words formed by derivation, theoretically there is no limitation in the length of the words formed by derivation as there is no limitation in the length of the sentence.

Probability of occurrence

If we calculate the possibility of occurrence of an item we will understand the difference between the productivity of sentence formation and the productivity of complex formation. The probability of occurrence of a given sentence is zero. Many practical applications of linguists assume that this is not true with lexemes. The frequency dictionaries assume that the lexemes differ in their frequency of occurrence and their probabilility of occurrence is not zero. There is a theory of sound change which predicts that the sound change occurs in the lexemes of greater frequency with the assumption that there is difference in the probabilities of occurrence of lexemes and the probabilities of occurrence that are not equal to zero. On the contrary there are no frequency dictionaries of sentences or theory of sound change which rely on the frequency of occurrence of sentences. Though dictionaries list the lexemes of a language, there is no attempt to list the sentences of a language.

Theoretically it is problematic to differentiate between above mentioned two probabilities of occurrence. In a language with 40 phonemes more than 40 types of arrangements can be made. Similarly in a language with n lexemes there could be sentences of more than n types of arrangements. So it is natural that sentence formation is more productive than word-formation. This difference in the probability of occurrence of lexemes and sentences can be attributed to the difference in the number of possible arrangements of the elements. Practically lexemes recur giving the impression that it has countable probability of occurrence. On the other hand sentences belong to a large set such that it is practically no use of talking about the probability of occurrence, though it is possible to compute the probability of occurrence of sentences in a finite corpus. The difference in the productivity of lexemes and sentences

is a mater of item familiarity; lexemes being recurring are considered as known ones than the sentences. Attributing this difference to the difference in the productivity of lexemes and sentences is ill-founded.

Productivity and nominalization

The discussion we are going to make is very relevant not only from the point of view of theoretical formulation on productivity but also from the point of view the title of the topic of present research. The discussion will be about Chomsky's article entitled `Remarks on nominalization' which is a very crucial one. Chomsky calls his position as lexicalist position contrasting it with the transformationalist position taken by others. He puts forward three main arguments against transformationalist approach to nominalization:

1. Nominalization is not productive
2. Derived nominals have the internal structure of phrases, not of derived sentences
3. Derived nominals are idiosyncratically related interms of both morphology and semantics to their corresponding verbs.

Productivity

According to Chomsky, nominalization is not productive as they cannot always replace the verb or adjective to which it corresponds in the given sentences.

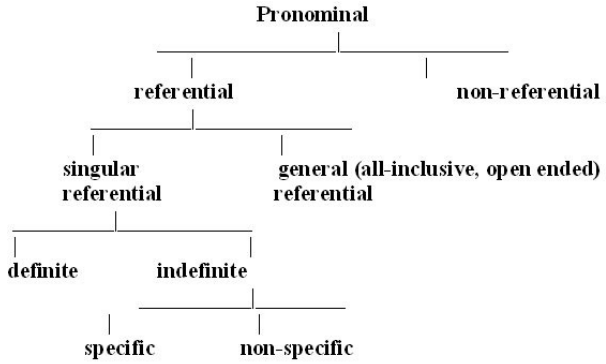
1. John is certain to win the prize.
2. John amused the children with his stories.
3. *John's certainty to win the prize.
4. *John's amusement of the children with his stories.
5. John is certain that Bill will win the prize.
6. John was amused at the children's antics.
7. John's certainty that Bill will win the prize
8. John's amusement at the children's antics.

Chomsky argues that the deep-structure relationships between the arguments and the verbs in sentences 1-4 are different from those in sentences 5-6 and so the derivation of the nominalized forms

such as certainty and amusement from sentential deep structures by transformations has to be avoided. But it should be brought into our mind that certainty is a lexicalized loan from Old French and not a case of productive word-formation. So lexicalization should be kept in mind while talking about the productivity of lexemes.

Internal structure

Chomsky notes down another problem in deriving derived nominals from sentential deep structures by transformational rules. For example beliefs cannot be derived from the sentence, What John believes, because of the existence of sentences such as John's beliefs are not mutually consistent; nor it cannot be derived from the sentences such as The things that John beliefs because of the existence of sentences like I respect John's beliefs, John's beliefs are intense. Chomsky has put forwarded this argument against the transformational hypothesis. This need not be so if we accept the transformational cycle. The transformational cycle operating at the lowest S level will give the derived noun before the matrix sentence is taken up, if a tree like structure as given below is proposed (Adopted from Bauer, 1983:77).



The S which forms the derived nominal does not contain any more information than that it contains the verb believe. This will solve the problems raised by Chomsky later in his article.

Chomsky (1970:193) claims first that among the following sentences the acceptability of the first sentence against the non-acceptability of the second sentence is due to the presence of gerund in the first one and the presence of the derived nominal in the second one, which goes in favour of lexicalist hypothesis.

1. His criticizing the book before he read it.
2. *His criticism of the book before he read it.

He argues that this is because the gerund (i.e. criticizing) is derived from the underlying verb (i.e. criticize) whereas the derived noun (i.e. criticism) is not derived in this fashion. He points out that the sentence (1) underlies the sentence He criticized the book before he read it, and that before he read it is a VP modifier and cannot modify an NP.

Chomsky's second problem is concerned with the phrases such as sudden refusal, obvious sincerity. Chomsky suggests that these phrases are to be derived from the underlying sentences which contain the adverbials (i.e. refused suddenly, was obviously sincere) in a transformationalist account. But this not necessarily true as these can be derived from the tree like structure given above with an extra embedded S node as a sister of N and so need not be a problem in the transformationalist perspective.

So the Chomsky's contention that derived nominals have the structure of NP cannot be taken as an argument against the transformationalist position. Thus there are two types of sources to account for the two types of nominals: the gerunds can be derived from the sentences as suggested by Chomsky and the derived nominals can be derived from the tree like configuration given above.

Idiosyncrasy

From the morphological and semantic points of view it can be stated that the relationship between the verb and its derived nominal is idiosyncratic. It can be realized that Chomsky's objections has its root in his treatment of taking all the derived suffixes together; he has considered together the suffix -ter which is found in the only word, laughter, which contains it, and the unproductive suffixes found in marriage and belief. The situation would have been simplified if he takes into account only the productive suffixes, keeping aside the unproductive suffixes.

The semantic idiosyncrasy can be partially explained in the same way. The example which Chomsky points out in favour of lexicalist's

position is trail, will not stand so as the established meanings of the nominalization do not correspond to all established meanings of the verb and the main meaning of the nominalization is specialized to one, not common, meaning of the verb. The examples such as doubt and residence counter to transformationalist's position given by Chomsky are French loans and do not subject to productive rules.

A further point to be taken into account here is that most of the derivatives listed in the lexicon are ambiguous and may be ambiguous in several ways. Take for example the derived noun qualification, whose ambiguity can be listed as follows:

1. A quality of suiting one for office
2. A required condition for holding office
3. The act of qualifying
4. The state of being qualified
5. Modification, limitation or restriction
6. An instance of (6)

There are two possibilities which have to be considered here; the first is that some of the meanings are productive and that a derived nominal is lexicalized in other meanings but productive in this limited number of meanings; the second possibility is that the relationship between derived nominals and the corresponding verb is not specialized; only the grammatical relationship of verb-nominalization is specified and the semantic relationship is determined pragmatically. Chomsky's objections to semantic irregularity can be considerably reduced by taking into account either of the proposals.

Complements

Another problem which Chomsky raises against transformational treatment for nominalization is with regard to the complements. Chomsky observes that refuse takes a noun phrase of a reduced sentential complements as its complements, whereas destroy takes only a noun phrase complement, either as a verb or as a noun; and this can be expressed by the feature neutral (which means unspecified for noun or verb) in the lexical entry. Though this could be a possible solution, this could be solved by a transformational approach too.

Semi-productivity

Semi-productivity as opposed to productivity is usually taken as being derivation as opposed to inflection. Semiproductivity can be illustrated by the instances of formation of nominals from verbs in Tamil. As we will see later while discussing about the deverbal nominalization, the suffixes such as -tal ~ -ttal, -kai ~ -kkai and -al ~kal ~-kkal are productive as they can be suffixed with any verbal bases. But the suffixes such as -ccal, -ai, etc cannot be suffixed with all the verbal bases and so can be shown as instances of semi-productivity. As these nominalizers cannot be suffixed with all the verbal bases, the nominalization can be considered semi-productive.

It is argued by some scholars that derivation should not be considered as productive as sentence formation. The opposing view is held by others who argues that if the rules of word-formation is allowed to operate freely, there will be derivation which are non-occurring but grammatical. A parallel situation is found in sentence formation also in which the sentences can be said to be grammatical but non-occurring. A sentence may be non-occurring because of the fact that the event is unlikely to take place. Such factors are not taken into account while discussing about the productivity in sentence formation, but the parallel factors becomes relevant while discussing about word-formation. This kind of different outlooks for sentence formation and word-formation should be stopped and the semi-productivity in word-formation should be considered at par with semi-productivity in sentence formation. But care should be taken to distinguish grammatically and acceptability in discussion on word-formation. In the light of this we have take into account some of the limitations on word-formation.

Some restrictions on productivity

Pragmatic restrictions

Generally a word will not be formed to denote an item or action or quality which does not exist. Existence can be seen as fictional existence, mythological existence, and observable existence. As we have seen earlier, the reason for the non-existence of the word

tangkakaaRRu `gold-wind' is that it does not exist in the real world. But it should be remembered that it is a fact about the real world and not a fact about language. In a fairy tale tangkakaaRRu can be used as a word. The readers may feel about its unacceptability in other situations. Requirements of existence are important because sometimes the non-existence may be shown as an argument against productivity in word-formation.

Nameability requirement

A lexeme should also denote something which is nameable apart from the fact that the speaker feels it to be real. Thus, for example, we do not form a word which cannot name anything. According to Rose (1973) the relationships which can be expressed by derivation are simple and general and possibly universal. This is a very significant since different languages make use of different aspects of reality in their structure which will be reflected in the derivational systems of languages. For example, a process of reduplication is used in Tamil which can be expressed by the adverb repeatedly in English.

avan pAaTTai keeT-Tu keeT-Tu makizh-ndt-aan.
He song_ACC hear_ADVP hear_ADVP enjoy_PAST_he
`He enjoyed hearing the song repeatedly'

New meanings are expressed in a language by new derivational markings when need arises. For example, in modern Tamil the suffix -ndar is used to form deverbal nouns to denotepersons who are professionally engaged to do the works denoted by the concerned verbs.

ooTTu `drive' + ndar = ooTTundar `driver'
iyakku `direct' + ndar= iyakkundar `director'

At the same time the following deverbal noun formations are not possible:

ndakku `lick' + ndar = *ndakkundar `one who is employed to lick'
uRangku `sleep' + ndar = *uRangkundar `one who is employed to sleep'

ndakkundar and uRangkundar are not in use at least now as there does not exist a person who is professionally engaged/ employed to lick nor does exist a person professionally engaged/employed to sleep, though ndakkundar and uRangkundar can be used respectively. Thus nameability becomes a matter of pragmatics at least to this extent.

Blocking

Aronoff (1976:43) makes use of the word blocking to denote the phenomenon of non-occurrence of a complex form due to the existence of another form. The blocking word could be a complex or simplex form. For example, the deverbal noun kuTippu from the verb kuTi `drink' in the sense of `drinking habit' is blocked due to the existence of zero suffixed deverbal noun kuTi `drinking habit' from the same verb. Blocking can be taken as an extension of pragmatic factor discussed above. The need for a new lexeme is also a factor to be considered apart from the existence of something to be denoted before being accepted by the linguistic community. Blocking does not prevent much the coining of nonce complex forms, but their institutionalization. In analogy with the deverbal noun ooTTundar we can have tiruTundar from the verb tiruTu 'steel' but tiruTundar is blocked by the existence of another deverbal noun tiruTundar 'thief'. But tiruTundar can be institutionalized or accepted as an established form if there exist in the society the persons engaged or employed for stealing.

Limitations on the bases

The make-up of some bases may cause restrictions on the operation of a given word-formation rule. The different types of restriction on the bases could be phonological, morphological, lexical and semantic in nature.

Phonological limitation

The phonological shape of the base can dictate whether it can be used as an input of a word-formation rule. For example, in Tamil, the deverbal noun suffix -ccal is added (i.e. if at all added) only to the verbs ending in i, ai or y.

eri `burn' + ccal = ericcal `irritative feeling'
alai `roam' + ccal = alaiccal `wandering'
paay `pounce' + ccal = paayccal `pouncing'
uyar `rise' + ccal = *uyarccal
pukazh `praise' + ccal = *pukazhccal

Morphological limitation

It is generally known that the borrowed words and formatives behave differently from native words and formatives. For example only Sanskrit words borrowed to Tamil undergo negativization by the prefixing -a/and, but the native Tamil words do not undergo nagativization by prefixing -a/and.

a + ndiiti `justice' = andiiti `injustice'
and + arttam `meaning' = anarttam `wrong sense'
a/an + poruL `meaning' = * aporuL/* anporuL

A few verbs are derived from Sanskrit nouns by the deletion of the last syllable and addition of the verbalizer -i.

taNTanai `punishment'- anai = taNT, taNT + i = taNTi `punish'
payaNam `travel'- am = payaN, payaN + i = payaNi `travel'

Lexical limitation

Some word-formation process could be triggered or limited by the individual roots. For example, in Tamil, the nominalization by suffixing -maanam and -vaay which could be triggered by the verbs varu `come' cannot be triggered by the verbs such as cel `go' and poo `go'.

varu + maanam = varumaanam `income'
varu + vaay = varuvaay `income'
cel + maanam = *celmaanam
cel + vaay = *celvaay
poo + maanam = *poomaanam
poo + vaay = *poovaay

As the derivation of the deverbal nouns like varumaanam 'income' and varuvaay 'income' are unpredictable due to their idiosyncrasy in their formation, this kind of derived forms have to be listed in

lexicon. This amounts to saying that less productive pattern is only found in lexicalized words.

Semantic limitation

Semantics also plays a part in limiting the base from undergoing derivation. A specific semantic feature could be the pre-requisite to a process of word-formation. In Tamil, for example, the instrumental bound morpheme -paan can combine with verbs underlying instrument in their meaning.

aTai `close' + paan = aTaippaan `stop-cock'
tuLai `make hole' + paan = tuLaippaan `the instrument for making hole'
mati `respect' + paan = * matippaan
tin 'to eat' + paan = * tinpaan

Collocatioal restrictions in the compound formation

In an endocentric compound the defining element always denotes the primary character of the subgroup denoted by the compound as a whole. Take for example the following endocentric compounds in Tamil:

kaaval `police' + ndaay `dog' = kaavalndaay `policedog'
caayvu `lean' + ndaaRkaali `chair' = caayvundaaRkaali`easy chair'

The defining characteristic of the subgroup of dogs is related to kaaval `police'. Similarly the primary feature of caayvundaaRkaali is related to caayvu `slope' and not to the feature of being upholstered. But, the species-genus compounds like the following are not possible where the determining element is implicit in the head element it self.

vilangku `animal' + ndaay `dog' = * vilangku ndaay
iTam `place' + maitaanam `ground' = * iTam maitaanam

But this is not without exception as the redundant formations having non-redundant reading could be acceptable.

keNTai `carp' + miin `fish' = keNTai miin `carp (fish)'
panai `palmyra' + maram `tree' = panaimaram `palmyra (tree)'

Semantic coherence

If a process of word-formation is productive, the resultant meaning of the derived forms can be specified. Take for example the following deverbal nominal formations in Tamil.

aaTu `dance/play' + tal = aaTutal 'dancing/playing'
paaTu `sing'+ tal = paaTutal `singing'
caa `die' + vu =caavu `death'
varu `come' + vu = varavu `coming/advent/income'
cel `go' + vu = celavu `expense/the amount spent'

The deverbal nominal formation by suffixing -tal is productive and so the meanings of the resultant nouns are easily predictable, whereas the deverbal nominal formation by suffixing -vu is less productive and so the meanings of the resultant nouns are semantically complex and the meanings cannot be easily predicted. Less productivity can be correlated with lexicalization and institutionalization which presupposes that institutionalized or lexicalized lexemes are semantically unpredictable. Productivity can be correlated with nonce formations which are semantically predictable. Very productive suffixes must have predictable meaning as in the case of -tal.

Analogy

Certain complex forms may be unique or extremely limited in productivity, that is limited to two or three forms. This has to be tackled not in terms of rules of word-formation but in terms of analogical formation which means formation of new lexemes on the model of already existing lexeme. The present day trend of using reduced place names in Tamil can be shown as examples of analogical creation.

Original form Reduced form
tanjcaavur tanjcai
kooyamputtuur koovai
putucceeri putuvai
ndaakappaTTinam ndaakai

The formations like the following verbs from nouns can also be shown as examples of analogical creations:

marundtu `medicine' + akam `place' = marundtakam `medical shop'
uNavu `food' + akam = uNavakam `hotel'

The formations of the following verbs from nouns can also be shown as examples of analogical creations:
payaNam `travel'- am = payaN, payaN + i =payaNi `travel'
anumaanam `inference' - am = anumaan, anumaan + i =anumaani `infer'

Other restrictions

A further restriction on productivity could be the lexicalization of a form with a meaning other than that which could have been assigned to it productively. For example, kuTi which means `habit of drinking alcohol' could be the cause for the non-availability of the ppu-suffixed formation, kuTippu, which could have been used with the same meaning. There is another instance in which the availability of a homophonous form with a unique meaning may be the cause for the non-production of a form by the productive rule. For example, the availability of pulavi meaning `sulkiness (of women)' could the reason for the non-production of the form pulavi meaning `female poet' in line with the related forms, pulavar `poet' and pulavan `male poet'.

Even non-linguistic reasons could be factors which restrict productivity. In Tamil certain newly coined administrative terms have been replaced by nonce formations on aesthetic grounds, which includes simplification. There are forms which have been replaced by other forms in the process of nativization. Many Sanskrit based forms have been replaced by Tamil forms in the same footing.

Earlier forms **New forms** veppamaani veppa aLavi `thermometer' kaaRRumaani kaaRRu aLavi `aerometer'

These idiosyncratic factors, though unsystematic in nature, have also to be taken into account in a grammar of word-formation as they act as further filters in the productive process of word-formation.

Productivity as a cline

It could have been inferred from the above discussions that productivity is not a either\or phenomenon as cline. It is true to say that some processes are more productive than others even if the limitations are taken into account. This is crucially associated with lexicalization. As it has been noted already, lack of semantic coherence has to be listed in the lexicon. If a process of word-formation is productively used for a longer period of time, it may give rise to institutionalised lexemes by making uses of an appreciable number of bases leaving aside only a fewer bases to be acted upon productively, thus rendering the process less productive. The influence of productivity and lexicalization on each other is not unidirectional as the inter-relation between them is very complex. It would seem sometimes that word-formation operates on some kind of variable rule as it is seen in morphological process where one kind of application has preference over another kind. Say, for example, though the bound form kaarar can be added to a number of nouns to form nouns denoting persons concerned with the senses meant by the nouns themselves as in the following examples,

camaiyal `cooking' + kaarar = camaiyalkaarar `cook'
kaTai `shop'+ kaarar = kaTaikkaarar `shop-keeper'

there are forms like the following in which the bound form aaLi is preferred to kaarar.

koTai `gift' + aaLi = koTaiyaaLi `philothrophist'
paTippu `education' + aaLi = paTippaaLi`educated person'

It is not our immediate concern that how a variable rule is expressed, but the fact of preferred productivity types is very important while talking about productivity as it clearly shows that productivity is not merely an either/or choice.

Restrictions acting in unison

The restrictions, which have been dealt so far, may not act singly, but in unison. Some of the restrictions may be ignored while others may be crucial. Cumulative factors could block the potential formation. Ideally, it might be possible to speak in terms of the

weightings of different restrictions, but in the present state of knowledge it may speculative.

Nonce formation and lexicalization

Lexicalization demands the history of words of a language. When a word is borrowed or a nonce formation is used in the speech, the speaker is aware of the newness of the form used. The exposure to mass media such as journalistic literature in the recent years makes it possible for the speakers to understand the novelty of the form used or coined to serve certain purpose. The acceptance of a new form in speech involves a number of reasons. The reason could be the status the producer of the new form holds in the society or the status of the journal which used the word at first and/or its wide distribution. Even then, that a new word is used or not used depends on the attitude of the society. It is generally an accepted fact that a new thing or a new concept requires new word. Sometimes new word need not be necessary, but just for the sake of prestige a new word may be used. In some situations a new form may be used just to gain an effect or to save space. It may be that a person may use a new word just because he has forgotten the usual lexeme. Necessity is the main reason for all these instances. The speakers dissatisfaction with the existing word may lead to new coinage. Even in situations where there is clear need for the new word, the society will not accept it easily. The speakers may find fault with the word at the brink of acceptance in terms of grammaticality, etymology, semantics and vulgarity. If a word is accepted in the society it will be assimilated in the language and will be used like other words. The speakers and the hearers will consider it as a symbol denoting the relevant concept correctly forgetting about the reason for its present form. The new learners of the language will satisfactorily use complex form without knowing why the complex form has that shape. How many speakers of Tamil language know that it is the phrase paaRai + aam + kal which has been assimilated into the word paaRaangkal! Many will not analyze iyakkundar as iyakku + ndar. Sometimes a word which cannot be separated will be analyzed and will be given folk etymology. If a complex form is started being treated as unanalyzed, it is likely to change phonologically and semantically. The above mentioned diachronic facts are undisputable, but it may create problem in the synchronic grammars.

Nonce formation

The speaker or writer at the spur of the moment to fulfill an immediate need coins the complex form. Even if the word is formed regularly and accepted in the society, still we can call it as nonce form. If a new word is considered by the speakers as one which they have heard already, the word loses its status of being a nonce formation. There are nonce formations which are used in certain occasions only; even if they are used in more than one occasion and are used by the different speakers, they do not lose the status of being nonce formations. This is the case where the immediate need gives rise to nonce formations which are unique or extremely rare.

taTakaLappoTTi `hurdle race' tokuppuutiyam `consolidated pay' ndampikkaiyillaattiirmaanam `vote of no confidence'

We are not aware that how many of the complex forms we come across daily are nonce formations. The characteristic feature of certain nonce formations is that they can cause ambiguity. We can find more of them in compounds and in nouns derived from verbs. pizhai aayvu can be interpreted as `the analysis which is wrong' or `the analysis which is full of mistakes' or the technical terminological equivalent of English `error analysis'; irukkai can be interpreted as `seat', or `act of sitting' or `living'; tiruccipas can be interpreted as `bus coming from Trichy' or `bus going to Trichy'. Because of this reason we have to consider that the compounds have a large number of contrasting verbs in the underlying structure which is claimed to be neutralized on the surface. And to account for the different interpretations during nominalization, it has to be taken for granted that the semantic markers like `ACT' and `FACT' are there is the deep structure.

Institutionalization

The next step to be followed in the history of a lexeme is that the nonce formation becomes known to the speakers. In this stage the word will be used with some of the possible meanings setting aside the potential ambiguities. It is at this stage that the compound tuNaiveendtar, for example, loses its ambiguous interpretations such as `the person assisting king', `deputy king', etc., and started denoting `vice-chancellor of a university', that is the new word has

under gone change from being type familiar to being item familiar. Thus the term has become institutionalized which is still transparent.

Lexicalization

The final stage of a lexeme is that due to the change in the structure of the language it gets the form which could not be obtained by productive rules. At this stage it can be said that the lexeme is lexicalized. The lexicalization takes place at every level of linguistic analysis. The lexicalized forms will be semantically opaque , that is they cannot be analyzed into morphemes synchronically. But opacity is not a necessary pre-requisite for lexicalization. Some items which are lexicalized because of the change in the morphological system may remain transparent. For example, the forms like putticaali `clever person' and palacaali `strong person' are formed by suffixing -caali with the concerned nouns are lexicalized and at the same time appear to be transparent.

The above discussions makes it clear that a word may appear as lexicalized or non-lexicalixed form. Some researchers feel that it is better to look at lexicalization separately on the basis of the three levels of analysis, phonology, morphology and semantics. Accordingly if the phonological behaviour of a lexeme is predictable and its semantic behaviour is not predictable, then it can be said that the lexeme is irregular with reference to semantics and its phonological behaviour need not be taken into account. Lyons (1977:547) makes use of the terminology fossilization instead of lexicalization. As the complex forms which are derived from simple forms by lexical rules are not productive in the language in its present state of structure, he calls them as fossilized forms. He gives pick-pocket, turn-coat as examples. He makes use of another term petrification whose extreme case is fossilization.

Types of lexicalization

Lexicalization is a diachronic process. But the traces it leaves as lexicalized forms have to be dealt within a synchronic grammar. If we take it for granted that a lexical item will be lexicalized by various ways, there should be a slot for each possible type of

lexicalization in the lexicon. We have to take into account the idiosyncrasy, that is irregularity and unpredictability, in the lexicalization. A full theory of the lexicon has to take into account this kind of data.

Lexicalization in the phonological level

Prosodic features and segmental features can undergo lexicalization due to changes in the respective features. As far as English is concerned the change in the stress pattern can cause lexicalization. In Tamil it appears that stress does not play a role in the lexicalization of lexical items. There are two factors which affect the segmental features; they are sound change and prosodic feature. The first one is explicit. The sound change may occur if a morph comes in isolation or in combination with other morph. For example, in Tamil, the forms ton `earlier' and pattu `ten' combines to form tonpattu, but due to sound change tonpattu became onpatu which is lexicalized. The question here is whether to list onpatu as a compound along with its idiosyncratic features or to take it as a simple form. The linguistic features are in favour of taking onpatu as simple word. There is no single once-and-for-all solution to this kind of problem. Sometimes the society may undo the changes that occurred in the language. For example arumaandta piLLai `good child' can be recast into arumarundtanna piLLai `the child which is like a rare medicine'

Lexicalization in the morphological level

Lexicalization of linking elements

We can find in Tamil compounds formed from two nouns which have part-and-whole relationship or material-thing relationship with an element aam in between them.

pullaangkuzhal (< pul 'grass' +aam+ kuzhal 'tube') `flute', paRaangkal (< paaRai 'rock'+ aam + kal 'stone') `rock', maNNaam kaTTi (< maN 'earth' +aam + kaTTi 'solid') 'clod of earth'

These compounds can be analyzed as pul aakum kuzhal `flute made up of grass', paaRai aakum kal `stone from rock', and maN aakum kaTTi 'solid from earth'. Now this kind of transparency is being lost

and the formation with aam as medial element is no more in vogue and so the formation is not productive. So these forms have to be considered as lexicalized simple forms.

Lexicalization of roots

The Tamil root il 'house' is lexicalized in formations such as illam 'house'(
viTTuveelai (< viiTu 'house' + veelai 'work') `household-work'
viiTukkaarar (< viiTu 'house' + kaarar 'person') 'husband; owner of the house'

Lexicalization of affixes

Like roots even affixes are lexicalized and become non-productive. In the following formations the negative prefix a- ~ and- is lexicalized:

a + ndiiti `justice' = andiiti `injustice'
a + ndaakariikam `culture' = andaakariikam `that which is uncultured'
and + avaciyam `that which is necessary' = andaavaciyam `that which is not necessary'

The negative prefix a- ~ and- (borrowed from Sanskrit) was used to form antonymous words which are lexicalized and the prefix is no longer used as a productive prefix for the formation of negative words from positive words.

Lexicalization at the semantic level

Semantic lexicalization is not a unified phenomenon and it is not clear how it is best classified. Several classifications have been proposed, but none of these is entirely satisfactory (Bauer, 1983:55). For example Lipka, as quoted by Bauer (1983:55), provides a classification of instances of semantic lexicalization in which the basic division is between lexicalization brought about by change in the cultural background and that brought about by change in the language. Lipka's classification leans on diachronic facts which are synchronically less explicit. The second type of classification depends on the assumption that addition or deletion of semantic information can cause lexicalization. This is a widely

accepted classification. Take for example the Tamil word eNNey 'oil'; it can be stated that it was formed by the compounding of the word eL `sesame seed' with ndey `edible oil' which resulted in the formation of compound eLndey > eNNey `sesame oil', but since the semantic information about eL is lost, eNNey is considered as a simple word denoting oil in general. Similarly the compound taNNiir 'water' which was formed by the combination of taN `cold' with ndiir `water' has become a simple word denoting `water' as the semantic information about taN is being lost. Though this classification appears to be good it can also create problems.

For example, the compound viLaiyaaTTuppiLLai (viLaiyaaTTu 'play' + piLLai 'child') 'playful person' which appear in the sentence avar oru viLaiyaaTTuppiLLai 'He is a playful person' has the addition of a few semantic information along with loss of certain semantic information. So we have to consider this kind of lexicalization as belonging to a third category. Many words cannot be grouped in this classification and some words cannot be subjected to this kind of classification. If an element in the word is lost or has virtually disappeared from the common usage, this classification will break down. Moreover, it is not clear what exactly is meant by `more semantic information'. Take for example, the compound taTTaccuppoRi (taTTaccu 'type print' + poRai 'machine') `typewriter'; we can infer from this compound that `it is a machine which prints when tapped'; but we cannot infer from the word taTTaccuppoRi 'typewriter' that it has key-board, shift-keys, platens, symbols for the numbers on the top line and so on. So it is difficult to ascertain about the additional semantic information. Moreover, the exocentric compounds like maramaNTai (maram `wood' + maNTai `head') `fool' and tuTiyiTai (tuTi `a kind of drum' + iTai `waist') `woman with slim waist' have their respective semantic heads which are not found in the constituent words. All the exocentric compounds are lexicalized ones and so they have to be listed in the lexicon.

Though there are doubts regarding the lexicalization and its classification, the semantic lexicalization is established. In the literature dealing about lexicalization, there used be discussions regarding the lack of semantic compositionality, that is the impossibility of predicting the full semantic information from the meanings of the parts of a lexical item. Though it is possible to

consider the instances where the full semantic information cannot be extracted from the meanings of their constituent parts as lexicalized and the instances where the full semantic information can be deduced from the meanings of the constituent parts as not lexicalized, it is difficult to draw a clear cut demarcating line between lexicalized non-lexicalized items. Even then we can definitely say that certain forms have been lexicalized semantically.

Lexicalization at the Syntactic level

It is one of the questions which is often asked in researches on word formation that what is the position of word-formation in the grammar. Though derivation is frequently dealt under phonology, as far as the compounds are concerned they are more frequently dealt under syntax. The answer to the question that what counts as syntactic lexicalization largely depends on the attitude taken to the role of syntax in word-formation. If word-formation is considered as a syntactic process, it is possible to talk about syntactic lexicalization. This can be termed syntactic lexicalization internal to complex form. Irrespective of our acceptance regarding the part played by syntax in word-formation, the syntactic behaviour of a complex form may or may not be predictable from general principles and/or the root(s) and affix(es) involved. If it is not predictable from this information, then it is possible to talk about syntactic lexicalization external to the complex form, that is lexicalization appears in the manner in which the complex form interacts with other items in the sentence.

Lexicalization internal to the complex form generally depends upon the way in which the grammar is formulated. But this does not seem to be a relevant consideration with reference to certain cases. The exocentric compounds such as the following where the first element is a verb and the second is a related word which could be the subject of the concerned verb can be quoted as examples of syntactic lexicalization internal to the complex form.

tuungku `sleep' + muunjci `face'= tuungku muunjci `one who is slothful'
azhu `cry' + muunjci `face' = azhu muunjci `a sulky person'

As these forms are lexicalized the syntactic fact about the precise way in which these forms are produced become irrelevant.

The syntactic lexicalization external to the complex form can be illustrated by the examples where the syntactic behaviour of a verb being a main verb differs from the syntactic behaviour of the some verb being a verbalizer. For example, the verb eTu `take' is capable of receiving an object being a main verb, but when it is collocated with the noun paci `hungry' as a verbalizer to a form a compound verb it does not take an object but a dative subject as shown in the following sentences:

1. avan pazham eTuttaan `He took banana'
2. *avanukku eTukkiRatu
3. avanukku paciyeTukkiRatu `He feels hungry'
4. *avanukku pazham paciyeTukkiRatu

Mixed lexicalization

So far we have discussed about only single type of lexicalization. But it is possible to find out instances in which more than one type prevail. Examples of forms which are lexicalized more than one way are far from exceptional. It seems that once a form is lexicalized in one way, it is easier for it to become lexicalized in others.

1. 4. Conclusion

Since Chomsky first put forth his so-called Lexical Hypothesis (1970), various attempts have been made to propose a theory of lexicon that would capture both the systematic and the idiosyncratic features of the lexical entries of the dictionary of a language. Aronoff was the first to build substantially on Halle's proposal to add a word formation component to the lexicon of generative grammar and to attempt to characterize the notion of WFR. The focus of Aronoff's work is on the process of new word formation. For him, word formation WFRs are used by native speakers to create new words. He characterizes WFRs as follows: Each rule 1) specifies a set of words, that is, the bases upon which it can operate; specifies a unique phonological operation which is performed on the base, which usually involves the addition of some affix; and 3) assigns a syntactic label and subcategorization for the

resulting word, as well as a semantic reading for it which is a function of that of the base. In his work, Aronoff adopts what he calls the weak Lexicalist Hypothesis, which is interpreted to mean that only derivational morphology is handled by WFRs; inflectional morphology is left to the syntax.

Bauer observes that Chomsky's "fairly substantial" evidence in favour of the lexicalist hypothesis cases to be as substantial as it first appears, and that Chomsky's arguments do not rule out the possibility a generative approach to word-formation. An affix can be said to be productive if it can appear in new words. These words may not grow beyond being nonce formations, or they may become established in the course of time. On the other hand a non-productive affix has to be accounted in terms of a list of bases with which it occurs. It need not be true that only non-productive affixes allow assimilation or cause change in stress pattern of the base. Some affixes could be more productive than the others within a group of productive affixes. The strictness of the limitations on the base and other factors which are less open to measurement can cause variation in the degree of productivity. Analogy presents the lower level of productivity as it creates only few forms. The upper limit is vague. It is unlikely that there is word-formation process which has absolutely no limitations. An affix cannot be added to absolutely any base. An affix can be said to be fully productive if it can be added with all bases definable by some semantic, syntactic or phonological properties. It is doubtful to consider any process productive as the prior existence of other lexemes can curb its application. It is doubtful to consider any process productive as the prior existence of other lexemes can curb its application. Semi-productivity may be either non-productive or productive with heavy restrictions on it. A morphological process can be said to be more or less productive in accordance with the number of new words it can form.

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CHAPTER 2
WORD CLASSES OR PARTS OF SPEECH

2. 1. Introduction

There need to establish word classes or parts of speeches in Tamil before describing how to form them. Words can be categorized from the point of view of morphology and syntax features. Bases on how a particular word get inflected and how and where it occurs in sentences, they can be assigned grammatical or word category. In English words are classified into eight parts of speech. They are: noun, adjective, pronoun, verb, adverb, preposition, conjunction, and interjection. Traditional grammarians, it appears recognizes only two classes, noun and verb as major grammatical classes in Tamil. The Tamil grammars written by the influence of English grammars assumes the same number of parts of speech for Tamil. It is proposed here to explore the word classes in Tamil from the point of view of morphology and syntax.

2. 2. Traditional approach to word class

The traditional grammars in Tamil classifies words into peyar 'noun', vinai 'verb', iTaiccol 'particle', and uriccol. It is always assumed that nouns and verbs are the major word categories and iTaiccol and uriccol are treated secondary to nouns and verbs. The words which does not show tense but inflect form case are grouped as nouns and those which show tense, but do not inflected for case are considered as verbs. The forms which does not occur independently and depend on noun or verb by appearing before or after them which include morphs, suffixes, bound forms of demonstratives and interrogatives, are considered as iTaiccol. The forms which are neither nouns nor verbs but depends on nouns and verbs and which give the meaning mikuti 'more' (similar to intensifiers) are considered as uriccol.

If we analyze closely the word classes of traditional grammarians, it can be interpreted that they recognize noun and verb as major word classes and consider iTaiccol and uriccol as a third class which depend on noun and verb. Traditional grammars consider uriccol as modifier to nouns and verbs. Thus traditional grammars identifies four classes of words: noun, verb, particles and modifiers. If we analyze old Tamil text, we may conclude that it is enough to have the four type of classes to explain the grammar of data of that period.

2. 3. Word classes for modern Tamil

As the modern Tamil has evolved new grammatical categories to express itself effectively, there need to posit new grammatical categories. Modern Tamil grammarians like Asher (1982), Kothandaraman (1986) and Lehman (1989) have posited new word classes for Tamil. Lehman elaborately discusses the word classes in Tamil (Lehman, 1989, 9-11). Applying morphological and syntactic criteria, he identifies eight parts of speech for Modern Tamil: 1. nouns, 2. verbs, 3. postpositions, 4. adjectives, 5. adverbs, 6. quantifiers, 7. determiners, and 8. conjunctions. According to him in modern Tamil all lexical or root morphemes can be classified into four types: two major groups of nominal and verbal roots and two minor groups of adjectival roots and adverbial roots. Based on the shape all the words can be considered as being inflected or uninflected forms of the roots of noun, verb, adjective and adverb. Nouns contain noun roots and verb contain verb roots. But postpositions, many adverbs, quantifiers and conjunctions can be considered as inflected and uninflected forms of nominal or verbal roots. As number of word classes proposed for Old Tamil are very few in number, a number of inflected and uninflected forms are reanalyzed in Modern Tamil to closed classes of various parts of speech as postpositions, adjectives, adverbs, quantifiers, etc. As we know only two word classes, nouns and verbs will inflect. Noun inflects for case and number and verb will inflects for tense, person, gender and number. Nouns exhibit word formation process. Nouns can be derived from verbs. Kothandraman (1989) classifies the free words into ten: 1. noun, 2. verb, 3. adjective, 4. adverb, 5. intensifier, 6. conjunctions, 7. Asher (1982:101-102) under the heading 'Operational definitions for word classes' classifies words into six classes: 1. noun, 2. pronoun, 3. verb, 4. adjective, 5. postposition, 6. numeral/quantifier, 7. particles, exclamation, 8. words expressing feeling, 9. addressing words, and 10. viLi eeRpuc col 'words accepting address '. He considers certain bound forms such as suffixes as dependent class and classifies them based on their shape and character into five types: 1. suffix, 2. postposition, 3. verbal participle, clitics, and fillers (caariyai or ndirappi). All the three scholars have taken verb, noun, adjective as word classes. Kothandaraman and Lehman have taken adverb and conjunction as word classes. Asher and Lehman have taken postposition as a word class. But Kothandaraman has taken postposition as a dependent

class. Kiriyaavin taRkaalat tamizh akaraati identifies the following word classes to categorize the words listed in the dictionary: iTaiccol 'paticles', iNaippu iTaiccol 'conjunctive particle', etirmaRai vinaimuRRu 'negative finite verb', cuTTuppeyar 'pronoun', cuTTuppeyaraTai 'demonstrative adjective', tuNaivinai 'auxiliary verb', peyarccol 'noun', peyaraTai 'adjective', vinaiccol 'noun', vinaiyaTai 'adverb', vinaimuRRu 'finite verb', viLippu iTaiccol 'address particle'. Let examine the word classes one by one.

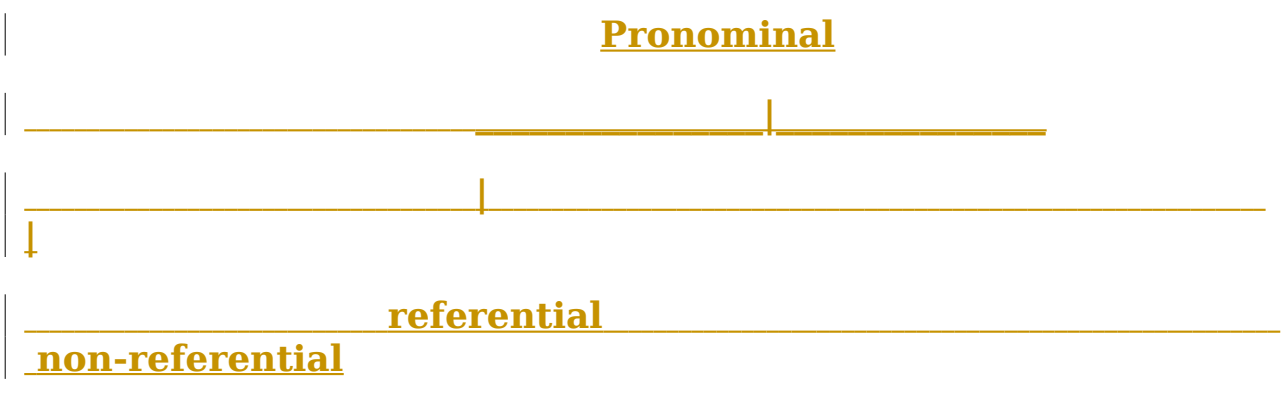
2. 3. 1. Nouns

Asher, Lehman and Kothandaraman establishes nouns as a class based on their morphological and syntactic characteristics. Nouns based on their morphological characteristics takes case and plural suffix. Based on their syntactic characteristics they function as head of postpositional phrase and also as subject or object of a sentence. The verb inflect in concordance with the person-number-gender of the subject noun. According to Kothandaraman, nouns those which take case suffixes and bound forms such as aana and aaka and function as subject and predicate. Lehman (1989:11) defines nouns as "those words which can take case suffixes and the suffixes -aaka/aay". There is no controversy between the three scholars in considering noun as a word class. Lehman has sub classified pronoun, quantifier, numeral as subclasses of noun.

2. 3. 1. 1. Pronouns

Pronoun function as a substitute to a noun. It differs form noun by signification. Noun signify one thing or one person, whereas pronoun signify different things or different persons depending on the context. That is why the number of pronouns in a language are a few compared to innumerable number of nouns. Asher takes pronoun as a separate word class. They form a closed set of words which shares most of the features by which nouns are defined. They take the same set of case suffixes which the nouns take and they can act as head of a postpositional phrase and they can function as subject or object of a sentence and they determine the choices of person/number/gender suffix of the verb in a sentence. Lehman does not describe pronouns under morphology; he describes it under the heading 'syntactic categories'. So it appears that Lehman takes pronoun as a syntactic category. He (1989: 92) considers

pronouns as a subgroup of nouns which do not take noun modifiers to form a noun phrase. He classifies the pronouns into two sub types: simple (ndaan 'I', avan 'he') and derived pronouns (yaaroo 'someone', yaarum 'anyone'). Pronouns are of different types such as personal pronouns, demonstrative pronouns, interrogative pronouns and reflexive pronouns. Lehman sub classifies pronoun taking into account the semantic concepts such as referentiality, definiteness and specificity (Lehman:93).



Personal pronouns are related to time and place. Speaker is identified as first person and listener can be identified as second person and the person who is talked about is identified as identified

as third person. Third person differs from first person and second person having more number of divisions. First person, second person and third person pronouns are distinguished by means of number into singular and plural. The second person and third person pronouns are distinguished by the feature 'high versus low status'. Only third person pronouns are differentiated by gender into masculine, feminine and neuter and by spatial deixis into remote proximate and remote. In addition to the three types of personal pronouns there is a fourth category of pronouns called reflexive pronouns which are coreferential to the nouns which are subject of the same or higher clause. The following table will establish the above discussed classification:

Place	**Singular**	**Plural**
First person	ndaan 'I'	ndaam 'we (inclustive)' ndaangkaL 'we (exclusive)'
Second person	ndii 'you' ndiir 'you'	ndiingkaL 'you'
Third person	avan 'he (remote)' ivan 'he (proximate)' avaL 'she (remote)' ivaL 'she (proximate)' atu 'it (remote)' itu 'it (proximate)' avar 'he/she (honorific)' ivar 'he/she (honorific)'	avai(kaL) 'they (neuter, remote)' ivai(kaL) 'they (neuter proximate) avarkaL 'they' ivarkaL 'they'
Fourth person	taan 'he, she, it'	taangkaL 'they'

Interrogative pronouns are indefinite referential pronouns. Interrogative pronouns can classified into specific and non-specific referential pronouns. The non-specific interrogative pronouns show the difference in terms of rationality and irrationality in their form (ex. yaar 'who', enna 'what'). Specific interrogative pronouns show the difference in terms of third person, number and gender in their form (ex. evan 'who (male third person)', evaL 'who (female third person), evar 'who (male/female third person)', etu 'what' evai 'what (plural)'). The interrogative pronouns with clitic um such as yaarum 'anyone' and etuvum 'anything' are examples of general referential pronouns. Interrogative pronouns with cilitic oo such as yaaroo 'someone', eetoo 'something' and ennavoo 'something' are examples of specific indefinite referential pronouns. Interrogative pronouns with clitic aavatu such as yaraavatu 'someone', eetaavatu 'something' and ennavaavtu 'something' are examples of non-specific indefinite referential pronouns.

2.3.1.2. Quantifier nouns

cila 'some', pala 'many', ellaam 'all' , elloorum 'all persons' are classified unde quantifier nouns. They functions as modifier to nouns (ex. cila manitarkaL 'some men'); they occurs after nouns taking case suffixes (ex. peenaakkaL cilavaRRai vaangkineen 'I bought few pens'). cila and pala can be taken as adjectives and cilavai and palavai can be considered as pronominalized forms which become cilavaRRai and palavaRRai when inflected for accusative case.

cila + avai > cilavai 'some'
pala + avai > palavai 'many'

2.3. 1.3. Numeral nouns

Numeral nouns can be classified into two: cardinal number and ordinal number. Ordinal numbers are formed from cardinal numbers by adding clitic aavatu or aam. The adjectival forms of ordinal numerals can be converted into pronominalized cadinal numbers (ex. oru + an > oruvan 'one male person', oru + tti > orutti 'one female person', oru + ar > oruvar 'one male/female person').

2. 3. 2. Verbs

There is no dispute between scholars in taking verbs as a word class. Verbs take tense and person-number-gender suffixes. Like some nouns verbs also morphologically deficient i.e. some verbs do not take all the suffixes meant for verbs. Verb is a obligatory part of a sentence except copula sentences (ex. avan maaNavan 'he is a student'). Verbs can be classified into different types based on morphological, syntactic and semantic characteristics. Based on the tense suffixes, verbs can be classified into weak verb, strong verbs and medium verbs. Based on the form and function, verbs can be classified into finite verb (ex. va-ndt-aan 'come_PAST_he') and non-finite verb (ex. va-ndt-a 'come_PAST_RP' and va-ndt-u 'come_PAST_VPAR'). Depending the non-finite whether non-finite form occur before noun or verb, they can be classified as adjectival or relative participle form (ex. vandta paiyan 'the boy who came') and adverbial or verbal participle form (ex. vandtu poonaan 'having come he went'). The classification of verbs into tanvinai and piRavinai based on semantics. The semantic definition that if an act is performed by oneself it is called tanvinai and if it is done by another then it is called piRavinai is not a suitable definition which can distinguish tanvinai from piRavinai (Paramasivam, 1983:2-3). It can be interpreted that basic verbs can be considered tanvinai (ex. ooTu 'run', kaaN 'see') and derived verbs can be considered piRavinai (ex. ooTTu 'cause to run', kaaTTu 'show'). Based on whether verbs take object or not when used in a sentence, verbs can be classified into intransitive verb (ex. poo 'go', vaa 'come') and transitive verbs (ex. paTi 'read', aTi 'beat'). Verbs can be classified based on their argument structure. Verbs can be classified based on the case relations they establish with the noun phrase they receive and valency.

2. 3. 3. Postpositions

Asher (1982) considers postpositions as a word class. "A postposition is an element that can be added to a nominal in one of a subset of the set of case forms ... to form a postpositional phrase standing in a functional relationship with a verb." (Asher, 1982:102) Postpositions are somewhat a heterogeneous class with members ranging from bound to free. Kothandaraman (1989) classifies postpositions under depend class. Nominal and verbal

form become postpositions in the course of time. Lehman (1989) also considers postpositions as a syntactic category. According to him the inflected and uninflected forms of nouns and non-finite forms of verbs have become postpositions. For example, to express various locative functions, nouns denoting various locations are used as postpositions. The nominal and verbal forms are syntactically reanalyzed as postpositions (uL 'inside', mun 'in front', meel 'above', kiizh 'below', aTiyil 'at the bottom'). There is no common opinion in considering such words as nouns or postpositions. Many of the noun forms which are used as postpositions are morphologically defective. That is they cannot occur with all case markers. Many of these noun forms are also defective. That is, they do not occur in all nominal postionss and with all grammatical function as other nouns do. For example, ndaTu 'centre' and iTai 'middle', function as postpositions while inflected for locative case suffix il as ndaTuvil 'at the centre' and iTaiyil 'in between'. They do not occur as subject, object or predicate. When a closed set of noun and verb occur as postpositions they follow a noun phrase and form with the preceding noun phrase a postpositional phrase,

The verbal and nominal forms loose their respective syntactic properties of nouns while functioning as postpositions. The postpositions can be classified based on the inflected form of the noun after which they come. The following is a list of postposition classified according to their from and the inflected noun after which they occur.

1. Nouns in bare form

1.1. After nouns in nominative case

muulam 'with' from muulam 'instrument'
varai 'until' from varai 'limit'

1.2. After nouns in oblique form

aNTai 'near' from aNTai 'side'
aruku 'near' from aruku 'nearness'
aaTTam 'like' from aaTTam 'motion'
kiTTa 'near' from kiTTam 'nearness'
kiizh 'under' from kiizh 'inferiority'
pakkam 'near' from pakkam 'nearness'
paTi 'according to' from paTi 'manner,way'

1.3. After nouns in dative case

appaal 'beyond' from demonstrative stem a + paal 'side'
appuRam after' from demonstrative stem a + puRam'side'
uL 'inside' from uL 'interiority'
kizakku 'east'from kizakku 'east'
kiiz 'below' from kiiz 'inferiority'
teeRku 'south' from teeRku 'south'
pin 'after' from pin 'posteriority'
piRaku 'after' from piRaku 'posteriority'

1.4. After nouns in accusative case

maatiri 'like' from maatiri 'manner'

2. Nouns + euphonic clitic -ee

After nouns in dative case

etiree 'opposite' from etir 'the oppposite'
kuRukkee 'across' from kuRukku 'transverseness'
veLiyee 'outside' from veLi 'exteriority'

3. Nouns + locative case suffix -il

After nouns in dative case
iTatyil 'in between' from iTai 'centre'
ndatuvil 'in the middle' from ndaTu 'centre'

4. Nouns + so called adverabializing suffix aaka

4.1. After nouns in oblique form

vazhiyaaka 'through' from vazhi 'way'

4.2. After nouns in dative case

patilaaka 'instead of' from patil 'substitute'.

5. Verbs in verbal participle form

5.1. After nouns in accusative case

oTTi 'regarding' from oTTu 'stick'
kuRittu 'about' from kuRi 'aim'
koNTu 'with' from koL 'take'
cuRRi 'around' from cuRRu 'urubte'
tavirttu 'except' from tavir 'avoid'
paRRi 'about' from paRRu 'seize'
taaNTi 'across' from taaNTu 'cross'
paarttu 'towards' from paar 'see'
viTTu' 'from from viTu 'leave'
vaittu 'with' from vai 'put'
nookki 'towards' from ndookku 'see'

5.2. After nouns in dative care

pinti 'after' from pindtu 'be behind'
munt-i 'before' from mundtu 'precede'

6. Verbs in infinitive form

After nouns in accusative case

tavira 'except' from tavir 'avoid'
ozhiya 'except' from ozhi 'cease'
poola 'like' from pool 'seem'
viTa 'than from viTu 'leave'
7. Verbs in conditional form + poola
After nouns in dative case
etirttaarpoola 'opposite' from etir 'oppose'
aTuattaarpoola 'next to' from aTu 'be adjacent'

8. Verbs in negative verbal participle form

After nouns in nominative case

illaamal 'without' from -il be not'
allaamal 'except' from -al be not'

2.3.4. Adjectives

Linguists differ in their opinions in taking adjective as a grammatical category. Scholars like Asher, Lehman and Kothandaraman take adjective as a grammatical category in Tamil. There is a complete lack of agreement among grammarians whether to consider adjective as a form class in Tamil. The difficulty in providing an operational definition for adjective crops up due to this reason. Lehman takes adjective as a syntactic category only. According to Lehmann (1989:131)"The lexical category of adjective is another syntactic category in Modern Tamil which has evolved in a diachronic process". Adjective can occur as an attribute in pre nominal position as modifier of a head noun in a noun phrase.

The traditional grammars of Tamil talks elaborately about nouns and verbs only. It appears that they have not treated adjectives and adverbs as separate categories in Tamil. They treat adjectives as relative participial forms of appellative verbs (kuRippup peyareccam) and relative participial forms of regular verbs (terindilaip peyareccam). The qualitative adjectives are reconstructed as qualitative nouns.

peeraacai 'extreme eagerness' < perumai 'bigness' + aacai 'desire'
ciRRaamal 'small lilly' < ciRumai 'smallness' + aampal 'lilly'

There are at least three kinds of opinion regarding the categorization of adjectives:

1. Adjective is a separate grammatical category
2. Adjective is not a separate grammatical category but a sub-category of noun or verb
3. Adjective is a mixed grammatical category

Adjectives come before a head noun as a modifier (ex. periya nduul 'big book'). It can be followed a determiner (ex. indta periya puttakam 'this big book'). When adjective occupies the predicate slot, it is pronominalized (ex. andta nduul periyatu 'that book is a big one'). Adjectives can be classified into simple adjectives (ex. ndalla 'good', periya 'big') and derived adjectives (azhaku 'beauty' + aana > azhakaana 'beautiful', uyaram + aana > uyaramaana 'high'). There is still some dispute over considering aana, uLLa, illaata the relativized forms of verbs aaku 'become', uL 'be', ill 'not' as adjectivalizer or not. Both adjectives as well as relative participle forms occur before a noun. But relative participle form of verbs co-occur with adverbial elements like uTan 'immediately', pin 'after', piRaku 'after', pootu 'at that time', mun 'before', maTTum 'up to', varaikkum 'up to' to form adverbial clauses (ex. vandta uTan 'immediately after coming', vandta pin 'after coming', varum mun 'before coming'). Adjectives (from appellative verbs) do not behave like this (Paramasivam, 1983:194). Paramasivam includes relative participle forms of verbs, relative participle forms of appellative verbs, negative relative participle forms of verbs and adjectives formed by the adjectivalizer aana as adjectives. At the same time he identifies relative participle forms and negative relative participle forms as phrases and appellative relative participle forms and adjectives formed by the adjectivalizer aana as simple words.

Those who argue adjective as a word class points out the property of adjective not taking the plural suffix kaL and case suffixes. Those who consider that adjective comes under nouns, take adjectival forms as alternate forms of the concerned nouns. For example, in the compound peeraapattu (< peer+ aapattu), the modifying element peer is considered as an alternate form of perumai and

peeraapattu will be analyzed as perumai + aapattu. The traditional grammars also carry the same opinion. There is no consistency in reconstructing the adjectives into nouns. For example irumozhi 'two language' is reconstructed as iraNTu + mozhi 'two language' and mummuurtti 'three gods' is reconstructed as muunRu + muurtti. There is no reason whey they cannot be analyzed as irumai + mozhi and mummai + muurtti respectively. There is no valid reason why perumai, ciRumai and ndanmai are not derived from the adjectival roots peer, ciRu and ndal by suffixing mai. Lakoff (1970) considers adjectives as verbs. There is enough justification in considering peer, ciR, and ndal as adjective or as a word class different form noun. In languages like English adjectives comes before a as a modifier and in where as a complement after be-verbs (ex. She is a beautiful girl. The girl is beautiful). In Tamil aaku/aay suffixed abstract nouns, which are in adverbial form and which come as complement before the be-verb iru, function as adjectives modifying the noun in subject slot apart form aana suffixed abstract nouns which function as adjectives before nouns under modification.

avaL azhakaana peN
she beautiful woman
'She is a beautiful woman'

andta peN azhakaaka/azhakaay iru-kkiR-aaL
that woman beautifully be_PRES_she
'That woman is beautiful'

The same N+aaka/aay form function as adverbial if the verb in predicate slot is not a be verb.

andta peN azhakaaka paaTu-kiR-aaL
that woman well sing_PRES_she
'That girl sings well'

aaka/aay added to abstract nouns denoting emotions also functions as adverbs when collocated with be verbs such as iru and uL.

andta peN koopamaaka/koopamaay irukkiRaaL that woman angrily be_PRES_she 'That woman is angery'

andta peN koopamaaka/koopamaay irukkiRaaL that woman angrily be_PRES_she 'That woman is angry'

Kothandaraman (1973:94-100) considers aaka as a case marker.

2.3.4.1. Test for finding out adjectives

Gopal (1981:88-93) following Quirk et al (1976:231-34) and Nadkarni (1971:187-193), lists four tests to find out adjectives:

- Intensifier rompa 'very' test
- Comparative test
- eppaTippaTTa 'what kind of' test
- Exclamation test

2.3.4.1.1. Intensifier rompa test

The intensifier rompa 'very' can co-occur only with adjectives. If it is used with other attributes, it will not produce acceptable phrases.

rompa ndalla paiyan
'very good boy'

*rompa va-ndt-a paiyan
very come_PAST_RP boy

*rompa marap peTTi
very wooden box

*rompa andta paiyan
very that boy

*rompa cila paiyan
very some boy

*rompa iraNTu paRavaikaL
very two birds
*rompa iraNTu maTangku kaTTiTam
very two times building

*rompa aaciriyar kaNNan
very teacher Kannan

2.3.4.1.2. Comparative test

Employing comparative test can identify adjectives. If the test is used with other attributes it will produce only ungrammatical phrases.

avan-ai viT-a ivaL ndalla-vaL
he_ACC leave_INF he good_she
'He is better than her'

*avan-ai viT-a ivaL va-ndta-vaL
he_ACC leave_INF she came_she

*avan-ai viT-a ivarkaL cilar
he_ACC leave_INF they few

*avan-ai viT-a ivarkaL iraNTu paRavaikaL
he_ACC leave_INF two birds

*at-ai viT-a itu iraNTu maTangku kaTTiTam
that leave_INF two times building

avan-ai viT-a ivan aaciriyar
he_ACC leave_INF he teacher

2.3.4.1.3. Interrogative eppaTippaTTa 'what kind of' test

Adjectives can be identified from other attributes by employing interrogative test using the interrogative word eppaTippaTTa 'what kind of'. By using the question word eppaTippaTTa, we can get answers as given in the first two phrases and not as given in the rest of the phases given below:

Possible answers
ndalla manitarkaL 'good men'

azhakaana manitarkaL
'beautiful men'

Impossible answers
va-ndt-a manitarkaL
'come_PAST_RP men'
aaciriyar manitarkaL
'teacher men'

cila manitrakaL
'few men'

Similarly, the answers for eppaTippaTTa peTTi 'what kind of box' is:

Possible answers
ndalla peTTi 'good box'
paLuvaana peTTi 'heavy box'

Impossible answers
marppeTTi 'wooden box'

2.3.4.1.4. Exclamation test

Adjectives can be differentiated from other attributes by exclamation test employing the exclamatory word evvaLavu 'how much'.

evvaLavu azhakaana paiyan!
how_much beautiful boy
'How beautiful boy he is!'

evvaLavu veekamaana kutirai!
how much fast horse
'How fast the horse is!'

evvaLavu pazhu-tt-a pazham!
how_much ripe_PAST_RP fruit
'How much ripped the fruit is!'

This test cannot be successfully employed for relative participles, quantifiers, appositional clauses and other noun phrases.

*evvaLavu va-ndt-a paiyan
how_much came_RP boy

*evvaLavu andta paiyan
how_much that boy

*evvaLavu cila peer
how_much some persons

*evvaLavu iraNTu peer
how_much two persons

*evvaLavu reNTu maTangku kaTTiTam
how_much two times building

*evvaLavu aaciriyar kaNNan
how_much teacher Kannan

evvaLavu as an exclamatory word can successfully collocated with nouns as compound nouns, but only to exclaim the quantity and not the quality.

evvaLau paiyankaL
'How many boys!'

evvaLavu marappeTTikaL
how_much wooden boxes
'How many wooden boxes!'

Generally, adjectives in Tamil are taken as a separate category on the basis of their syntactic behaviour and not from the point of view of their morphological features. But still they can be treated as separate category from the point of view of their morphological behaviour too. The adjectives of peer type (discussed in the later part) show some kind of morphological regularity. This can be seen from the following information about peer type of adjectives. For example, peer occurs as peer, perum and periya while function as adjectives (the details are dealt in the later part of the paper). The adjectives with iya, aiya and a as adjectival suffixes (dealt in the later part of the paper) can be treated so on the following grounds.

1. They appear before nouns as modifiers.

umaa oru periya paaTaki
Uma one big singer
'Uma is a good singer'

2. The adjectives can be intensified by intensifiers such as mika.

umaa oru mikap periya paaTaki
Uma one very big singer
'Uma is a very good singer'

3. The adjectives can be modified by comparative propositions introduced by the comparative elements such as viTa, kaaTTilum.

umaa raataiyai viTa mikap periya paaTaki
Uma Radha_ACC than very big singer
'Uma is very talented singer than Radtha'

4. If the adjectives function as predicates they occur in their pronominalized forms.

paaTaki umaa raataiy-ai viTa mikap periya-vaL
singer Uma Radha_ACC more very talented_she
'The singer Uma is very talented than Radha'

5. The adjectives of the periya-type take pronominalizers such as atu, avai, etc.

periya-tu 'big one', kariya-tu 'black one', ndalla-tu 'good one'
periya-vai 'big ones', kariya-vai 'black ones', ndalla-vai 'good ones'
periy-van 'big man', kariya-van 'black man', ndalla-van ' good man'

6. The stop consonants (k, c, t, p) of the nouns which follows the adjectival suffix a of the adjectives of the periya-type do not geminate.

periya paiyan 'big boy'
ciRiya peTTi 'small box'

The first two statements are based on the syntax and the fourth and are based on morphology and the sixth based on phonology.

2.3.4.2. Concluding remarks of Gopal on adjectives

Goapal's comes to the following conclusion through his analysis of adjectives in Tamil: "The conclusion arrived at is that adjectives are not a separate part of speech and are only separate category like that of infinitives and verbal participles. The various forms which are considered to be adjectives in Tamil by various scholars which in reality are not adjectives have been taken for study in detail ... and rejected as they do not account for certain syntactic requirements. That is, the demonstratives, quantifiers, numerals, nominal compounds, participles are not considered as adjectives. And certain syntactic tests have been posited to identify adjectives. ... A constrictive study of English and Tamil is undertaken ... in order to show adjectives in Tamil in the surface

structure behave differently from adjectives in English.... different forms of adjectives are taken up and it has been shown that the shape cannot determine an adjective and it must be treated as a syntactic category rather than a morphological category." (Gopal, 1981:246-247).

2.3.4.3. The Reasonable solution to the problem

Adjectives in Tamil can be taken as a grammatical category on the basis of their syntactic function. They come before the nouns to attribute them and they are not followed by a postposition. Bhat (1991) argues in details how adjective establishes itself as a separate category like noun and verb.

There is a pair of forms for a number of adjectives:

1. One is a bound form that has to be added immediately before a noun like a prefix.

ndal 'good' found in the word ndalaaci 'good wish'

2. The other is an a-ending form that is independent.

ndalla 'good' found in the phrase ndalla eNNam 'good thinking'

We have at least three alternative solutions in dealing with the paired form.

1. The bound form can be taken as an allomorph of the a-ending forms.

2. The bound form can be considered as a reduced form of its counterpart, which is a quality noun (ex. ndanmai 'goodness' + eNNam > ndalleNNam, as proposed by the traditional grammarians).

3. The bound form can be considered as a root or base from which the a-ending forms are derived by the suffixation of the adjective maker -a.

The third alternative is not fruitful and productive as far as Modern Tamil is concerned. The second alternative indirectly supports the formation of a stem by truncation. The first alternative holds well.

But if we do not give categorical status to the bound forms, the relation between many related forms will be denied. For example, the relation between ndalla 'good', ndanku 'well', ndanRu 'fine' ndanmai 'benefit', ndalam 'state of good health' and ndalloor 'great person' cannot be established if these words are considered monomorphemic. The denial of categorical status to the bound form probably needs rethinking.

2.3.4.4. Whether to consider relative participle form as adjective or not

There is not doubt that relative participle forms of verbs attribute the noun which follows them. So naturally one may doubt whether to consider the relative participle form of a verb as adjective or not. The difference between the adjectivalized forms such periya 'big', ciRiya 'small' and koTiya 'cruel' of appellative verbs peri 'be big', ciRi 'be small', koTi 'be cruel' and the adjectivalized forms (i.e. relaive participle forms) of the normal verbs is that the former is adjectivalized at the lexical level and the latter is adjectivalized at the sentential level. The adjuctivalization does not disturb the argument structure of the verb that is adjectivalized.

ndaan paLLiyil ndeeRRu paTitta paaTattai inRu avan paTittaan
I school_LOC yesterday studied_RP lesson today he studied_he
'He studied the lesson which I had studied in school yesterday'

Though adjectivalization changes the category of a verb into an adjective, it does not disturb its argument structure and its characteristic feature of expressing tense or negative. There is no need to give the adjectivalized forms of verbs in dictionary as their resultant meanings and acquired syntactic characteristics can be predicted. KTTA has listed only those relativized forms that are lexicalized into adjectives due to their idiosyncratic meaning.

2.3.4.3. Position of adjectives in noun phrase

The position of adjectives among the elements occuring in NP reveal that adjectives occur inbetween the noun and the relative participle form. If the relative participle form occurs in an NP, then the acceptable postion of adjective is after relative participle form.

va-ndt-a ndalla paiyan
come_PAST_RP good boy
'the good boy who came'

ooTiya azhakaana kutirai
run_PAST_RP beautiful horse
'the beautiful horse ran'

*ndalla vandta paiyan
*azhkaana ooTiya kutirai

In the case of compound noun the adjective cannot immediately attribute the head noun (i.e. It cannot occur inbetween the constituents of the compound noun.) The adjective precedes the compound noun.

*mara ndalla peTTi
wooden good box

*pon azhakiya cankili
golden beautiful chain

ndalla marappeTTi
'good wodden box'

azhakiya pon cangkili
'beautiful golden chain'

The demonstratives generally precede the adjective.

andta ndalla paiyan
'that good boy'

indta azhakiya ciRumi
'this good girl'

?ndalla andata paiyan
good that boy

?azhakiya indta ciRumi
beautiful this girl

The qunatifiers like cila 'few', ovvoru 'each', iraNTu 'two', mutalaavatu 'first', etc. can be interchanged with adjectives.

ndalla cila manitarkaL
'good few men'

cila ndalla manitarkaL
'few good men'

ndalla ovvoru manitarum
'good each one of good men'

ovvoru ndalla manitarum
'each one of good men'

ndalla iraNTu ciRumikaL
'good two girls'

iraNTu ndalla ciRumikaL
'two good girls'

ciRandta mutalaavatu paiyan
'best first boy'

mutalaavatu ciRandta paiyan
'first best boy'

2.3.5. Adverbs

Kothandaraman (1989) and Lehman (1989) consider adverb as a word class. Lehman deals adverb only as a syntactic category. Asher (1982:101-102) does not give adverb under "operational definition for word classes". But he talks about adverb while taking about the formation of adverb (1982:199-203). While talking about the position of adverbs in sentences (1982:57), he confers that in sentences other than locative and existential sentences, adverbs normally follow subject or indirect object or precede direct object, which tends to be the constituent that is closest to the verb. If different types of adverb occur in the same sentence it is not possible to state clearly the order of their occurrence. There is a tendency for temporal adverbs occurring before locative adverbs. Adverbs can be classified as simple and derived adjectives. aaka and aay are considered as adverbializers which form adverbs form when suffixed to a set of nouns.

azhaku + aay > azhakaay 'beautifully'
azhaku+ aaka > azhakaaka 'beautifully'

Certain inflected and non-inflected forms of nouns and verbs can be syntactically reanalyzed as a closed set of adverbs. The form like aTikkaTi 'frequently', inimeel 'hereafter', innum 'still',

maRupaTiyum 'again', miiNTum 'again' and mella 'slowly' justifies the postulation of a separate category of adverbs in Modern Tamil. These word forms were considered as inflected verb forms or composite word forms consisting of a noun a clitic. Certain postpositions such as mun 'before', munnaal 'before' and piRaku 'afterwards' can function as adverbs. The forms such as apaalee (appaal 'further'+ee) 'afterwards', uLLee (uL 'inside'+ee) 'before', and appuRam 'after', the nouns which are inflected for locative case such as iTaiyil (iTai 'in between' +il) 'in between' and ndTuvil (ndaTu 'centre'+il)'at the centre', the past participle form of verbs such as paarttu (<="" p="">

Asher (1982) and Kothandaraman consider the forms which are derived by suffixing the infinitive form aaka and past participle form aay of the verb aaku 'become' as adverbs. But Lehman (1989) by pointing out the functioning of aaka/aay not only to form adverbs but also as forms of different functions, concludes that aaka can be taken either as a bound postposition or a clitic. Renukadevi (1987) classifies the adverbs semantically into temporal adverbs (ex. inRu 'today', ndaaLai 'tomorrow'), place adverbs (ex. ingku 'here', angku 'there'), manner adverbs (ex. mella 'slowly', ndanku 'well'), frequency adverbs (ex. aTikkaTi 'often', maRupaTiyum 'again' and quantifier adverbs (ex. mika 'very', veku 'very'). Asher and Lehman consider quantifier adverbs as a separate class called quantifiers. Paramasivam (1983) considers past participle form of verbs as adverbs. As past participle form carries tense suffix, scholars are reluctant to group them as belonging to the word class adverb.

2.3.6. Quantifiers

Asher (1982) takes numerals and quantifiers together as a separate word class. Lehman (1989) lists quantifiers under syntactic categories as a separate category. Asher (1982:102) makes the following observation: "No overall definition of the class of numerals and quantifiers is possible in terms of morphological features. They can occur as modifiers of nouns and, unlike adjectives, the other major modifiers of nouns are not subject to adverbial modification." A closed groups of words such as the following can function as quantifiers: caRRu 'a littele', muzhu 'whole', konjcam 'a litte', ittanai 'this much', attanai 'that many', ettanai 'how many', ivvaLavu 'this much', avvaLavu 'that much',

evvaLavu 'how much', ndirampa 'much', ndiRaiya 'much, many', mikavum 'much'. All these quantifiers can occur as noun modifiers. However, their distribution or position of occurrence is not identical. For example, muzhu occurs always before a head noun (ex. andta muzhut tokai 'that full amount'), caRRu generally occurs before temporal nouns (ex. caRRu ndeeam 'a little time'), mikavum occurs before nouns suffixed with aaka, aana, illaata, uTaiya, ceerndta (ex. mikvum azhakaaka 'very beautifully', mikavum azhakaana 'very beautiful', mikavum azhakillaata 'very ugly') and other quantifiers occurs before the phrase adjective + N (ex. konjcam periya paattiram 'a little big vessel'). The quantifiers such as muzhu 'whole', ittanai 'this much', attanai 'that much', ettanai 'how much' and mikavum 'much' comes before an adjective as a modifier (ex. koncjam cinnak kai 'a little bit small hand'). Kothandaraman classifies the modifiers such as mikavum 'much' which can come before noun, verb, adjective and adverb as intensifiers (vallaTai in Tamil) (ex. mikavum kaRuppu 'more blackness', mikavum piTikkum 'like more', mikavum ndalla 'very good', mikavum veekamaaka 'very fast'.

2.3.7. Determiners

The modifiers such as indta 'this' and andta 'that' which are demonstratives and which can occur in pre-nominal position are classified as determiners by Lehman (1989). He has included under syntactic categories. They specify or identify the referent of a noun phrase by describing the referent's proximity to the speaker. itndta 'this is the proximate demonstrative determiner and andta 'that is the remote demonstrative determiner.

2.3.8. Conjunctions

Kothandaran and Lehaman have taken conjunctions as a word class. Lehman lists it under syntactic categories. Conjunctions conjoins two words, phrases or sentences. Though co-ordination in Tamil is mainly performed by the use of clitics, there are also a number of verb forms which are syntactically reanalyzed to co-ordinate conjunction words.

anaaal 'but' conditional form aaku 'become'
allatu 'or' nominalized form of al 'be not'
illaiyenRaal 'or' iilai 'be not' + conditional form of en 'say'

2.3.9. Clitics

Clitics are called kuRaiccoRkaL 'partial words' in Tamil. Clitics have been elaborately studies by Arokyanathan (1982). Kothandaran classifies clitcs under dependent class. He calls it as oTTu 'affix'. He defines clitics as elements like taan, um, aa which occur in different places in phrases and which can effect change to the phrasal meaning and which can be considered neither as suffixes of nouns nor as suffixes of verbs. Lehman lists clitics under syntactic categories. According to him "Clitics are bound forms which are affixed to a word not due to a morphological process, but due to some phonological rules of the grammar. They are not thus representations of inflectional or derivational categories and not restricted to the occurrence with words of one particular word class only, as inflectional and derivational suffixes are. Clitics can be suffixed to words or heads of all syntactic categories, except adjectivals and a number of nominals functioning as noun modifiers". All clitics in Tamil are pre clitics only, i.e they are added at the end of words. A clitics with a specific phonemic shape perform various semantic functions. So, it is possible to postulate a number of semantically different clitics, which are homophonous.

The following clitics can be posited for Modern Tamil:

Citics	Their functions
um	inclusive, concessive, coordination
oo	disjunction
ee	emphasis
taan	emphasis
aa	interrogation

Asher classifies emphatic markers, ee and taan, interrogative marker in yes/no question, aa, and the coordinators um and oo under particles.

2.3.10. Verb dependent words

Kohthandaraman (1989) classifies words such as pin, pootu, uTan as found in phrases such vandta pin 'after some one came', vandta pootu 'while some one came', vandta uTan 'as soon as some one came'. He defines verb dependent words as that which have lost nominal feature and which comes after relative participle form as suffixes forming past participle forms as well as those which come after past participle form as suffixes forming relative participle forms. Lehman groups pootu time relation 'at that time', piRaku, appuRam, pin which refer to posterior time relation 'after', mun which refer to anterior time relation 'before', uTan which refers to time relation 'immediately', etc. as complementizing nouns. The words such as takka, kuuTiya, veeNTiya which occur in compound relative participle forms such ceyyatakka 'that which is worth doing', ceyyakkuuTiya 'that which is possible to be done' and ceyyaveeNTiya 'what which should be done' as verb dependent words.

2.3.11. Exclamatory words

Kothandaraman groups words such as aiyoo, ammaa, appaa found in the following sentences as exclamatory words.

aiyoo, enn-aal indta tukkatt-ait taangk-a muTiya-villaiyee.
Oh I_by this tragedy_ACC bear_INF be_able_INF_not
Oh! I could not bear this tragedy'

ammaa, itu enna cootanai
Oh! this what test
Oh! what kind of test is this.

appaa, enn-aal veyilait taangk-a muTiyavillaiyee
Oh I_by this sun_ACC bear_INF be_able_INF_not
Oh! I could not bear sun'

2.3.12. Words expressing feelings

The elements such as kalakala, paLapaLa, cap, vazhavazha, tiTiir 'immediately' as found in phrases such as kalakalavenRu 'joyfully', paLapaLavenRu 'shiningly', capenRu 'ordinarily', vazhavazhavenRu 'continuously' and tiTiirenRu 'immediately' as words expressing feelings.

2.3.13. Words of calling

Kothandaraman (1989) groups eenungka, ennangka, eey, aTee as belonging to the word class viLippu col 'words for calling'. The following sentences will exemplify these expressions.

eenungka, ingkee vaangnka
what_you here come_you
'Hello come here'

eey, ingkee vaa
hello here come
'Hello come here'

2.3.14. Words of accepting call

Kothandraman (1989) classifies ennangka and eenungka which are expressed as response to the call as viLi eeRpuc col 'words of accepting call'. The following discourse will exemplify these expression.

umaa, ingkee vaa
Uma here come
'Uma come here'

ennangka/eenungka kuuppiT-T-iingkaL-aa
what_you call_PAST_you_INT
'Hello, did you call me?'

2.3.15. Suffix

Kothandaraman classifies suffixes as vikuti and as a dependent class of word elements. He includes case suffixes such as ai, aal, ku, etc personal suffixes such as an, aan, aL, aaL etc, aana which is a adjectivizling suffix and aaka which is an adverbializing as suffixes.

2.3.16. Fillers

Kothandaraman classifies fillers under dependent classes of words as caariyai or ndirappi. He defines fillers as those elements which does have any grammatical and lexical meaning and helps in the

joining of words. The phonemic element in and an in the following examples are fillers.

viiTT-in-ai 'house_FIL_ACC
vandt-an-an 'come_PAST_FIL_he
cenR-an-an 'go_PAST_FIL_he

2.4. Conclusion

As for as parts of speech or word class is concerned the grammarians classifies and defines the words based on the grammar formalism they follow. That is why certain word classes found in one grammatical analysis is not found in the other. For the same reason the word class which is considered as a subclass of one class is considered as a separate class in another classification. As Kothandaraman classifies words and other grammatical elements into main grammatical or independent categories and sub grammatical or dependent grammatical categories, he includes suffixes and fillers under his classification of words and grammatical categories. There are certainly pertinent reasons to classify adjectives and adverbs as word classes. But classifying relative forms of verbs as adjectives and past participle forms of verbs as adverbs is not acceptable to many grammarians. If we do so then we have take the relative participle markers and verbal participle markers respectively as adjectivilizers and adverbializers. Kothandaraman identifies new class of words such as exclamatory words, words denoting feelings, words of call and words of accepting call to accommodate modern Tamil data. Paramasivam (1983:98) states that there is no definite basic theory to classify words. Even if one follows traditional grammarians or linguists there may be exceptions. There is no grammatical theory which can help us to classify words without exceptions. It is not a surprise that there are problems in classifying words as there are problems in defining words even.

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CHAPTER 3
TYPES OF WORD FORMATION

3.1. Introduction

A proper understanding of the word-formation in a language needs classification of such processes on formal grounds. Bauer (1983) classifies the word-formation in English as follows:

1. Compounding
2. Prefixation
3. Suffixation
4. Conversion
5. Backformation
6. Clipping
7. Formation of blends
8. Formation of acronyms
9. Word manufacturing

Tamil makes use of compounding and suffixation extensively for the formation of words. Though the present paper attempts to give the types of word formation in Tamil (Rajendran, 1993) based on typology, explanations will be given by raising certain problematic issues.

3.2. Compounding

A morphologically complex word containing at least two elements which can otherwise occur as free forms (i.e. as independent words) can be considered as a prototypical compound.

1. talaiyaNai (< talai 'head' + aNai 'support') 'pillow'
2. marappeTTi (< maram 'wood' + peTTi 'box') `wooden box'
3. kiLippaccai (< kiLi 'parrot' + paccai 'green') 'parrot green'

Compounding is a grammatical process by which complex words are formed from smaller elements that have word status under normal circumstances. Affixation is different from compounding as it involves morphemes that do not have word status. It is the word-like behaviour of a string of elements that indicates that it is a compound. Though rearrangement of constituents in a construction is possible in a language, the constituent parts of compounds cannot be rearranged.

1. talaiyaNai 'pillow' vs. ?aNaitalai 2. marappeTTi 'wooden box' vs. ?peTTimaram 3. kiLippaccai 'parrot-green' vs. paccaikkiLi 'parrot' ("?" marks indicates that the expression does not mean or refer anything.)

In addition, the constituents of a compound do not allow themselves to be separated by intervening material showing word like quality. In languages like English the compounds are distinguished from phrases by their typical stress pattern. In some languages there is linking morpheme compounding the constituents (as found in the compound morph-o-sytnax).

The compounds can be studied at least from five points of view:

1. Based on the grammatical categories of words which constitute compounds
2. Based on the semantic classes
3. Based on the possible linking elements
4. Based on the deep structure
5. Based on the morphophonology.

Compounding is one of the word-formation strategies language employ to form new words out of the existing words in order to enrich and update their lexicon. It is essentially an abbreviatory mechanism that languages prefer over corresponding phrasal or clausal constructions. Compounds are economical, in that they use less number of morphemes, when compared to phrases or clauses. They are unambiguous because of the fixed word order, and unique in the sense that they acquire specialized meaning and hence form the immediate choice of the native speakers of any language.

Compounding

Compounding is a very productively and frequently observed phenomenon in world languages, because most of the languages exhibit a great majority of complex words that are compounds. The frequency of compounding also results from the fact that compound are lexical fillers. The lexical gaps that may arise in the language as a result of the important and development of science and technology, change in cultural concepts etc. cannot be effectively served by the existing words. and therefore languages overcome

this difficulty by resorting to mechanism like compounding, which facilitate the formation of new words out of the existing words.

Indian languages are rich in compound formation. The study of compound formation goes back to ancient Indian grammatical tradition where grammarians like Panini of 5th B.C. and Patanjali of 2nd B.C. are the first linguists to have recognized the importance of this kind of word formation strategy. Tamil, like the other Dravidian languages exhibits a rich system of compound formation, and in a way compensates for the lack of productive multilayered derivational mechanism in the language.

Compounds are distinguished form proper derivatives, i.e. affixal words, on the basis of the lexical formatives involved in their composition. While affixal derivation consists of a base and an affix, compounds are composed of more than one word or nucleus. Compounds can be formed either by repeating or duplicating a word or a lexeme. Various types of compounds are distinguished on the basis of lexical formatives involved in compound formation. Though compounds and phrases are similar in respect to their composition in that both of them consist of more than one simple or complex words differ on various counts. Compounds are generally characterized by the following properties that distinguish them from phrases:

1. Semantic non-compositionality
2. Fixed word order
3. Suppression of inflectional morphology on the non-head constituent (NHC)
4. Non-interruptability of the constituent
5. Irreversibility of the constituents
6. Referential opacity.

Though it is possible to distinguish between a compound and phrase on the basis of these criteria yet there is no clear demarcation between them due to several language specific reasons.

In the Sanskrit grammatical tradition, particularly in Panini's ashTaadhyaayi the word (which is stem in the case of nouns and root in the case of verbs) is defined as the nominal unit of syntax

always occurring in the inflected form for nominal categories and verbal categories. However, when words occur as non-head constituents of compound they always occur uninflected. Conversely, in phrases the morphological inflections are retained. The nouns in phrases are fully inflected forms showing adnominal relations. So the distinction between a word, a compound and phrase is rather clear in Sanskrit. This kind of relation is not distinct in Tamil. This is because the nominal base, which is equivalent to a stem, is non-distinct from the corresponding nominative form in syntax. Therefore, uninflected words are often non-distinct from nouns, which involve in compound formation.

In Tamil, words in nominative form are not overtly marked by case and hence they appear to be uninflected in surface representation. As nouns appear in uninflected form as non-head constituents in compounds, and since the suppression of inflected morphology is an essential pre-requisite of compounding, consequently, it is difficult to distinguish between nouns which occur as syntactic constituents from those which occur as compound constituents. The adnominal relation between constituents of a compound can be realized without any inflectional marker but the same relation in a phase is realized by marking the non-head constituent either by genitive or occasionally by dative case. The can be evidenced form the example given below:

viiTTuk katavu
'house window'

raatai kaNNan-in manaivi
Radha Kanna_GEN wife
'Radha is Kannan's wife'

raatai kaNNan-ukku manaivi
Radha Kanna_DAT wife
'Radha is Kannan's wife'

Since genitive marking is optional and rarely used in Modern Telugu the non-head constituent appears mostly uninflected and sometimes in the oblique form. It can be inferred from the above facts that the distinction between phase and compound is not clear-cut in Tamil. Since in Tamil genitive inflection is optional and oblique stem formation is not a regular phenomenon, the

distinction between phrase and compound is not clear. Therefore, the non-head constituents which are the uninflected forms of nouns, look identical to the nominative forms in syntax, and they can be interpreted as words in Aronoffian sense, i.e. word minus inflection (Aronoff, 1994). The input to the compounding is always a word or a lexeme and the output is also a word or a lexeme.

Compounding is widely used in Tamil for new coinage of words. It may appear sometimes that mere juxtaposition of two nouns can form a compound word. The compounds can be sub classified in many different ways by the form classes of the items that make up the compounds, by semantics classes, by the presumed underlying operators linking the two elements, by presumed underlying syntactic functions and so on (Bauer 1983:201-202). One can take up the mixture of two or more of the above-mentioned methods of classification. Here we classify the compounds based on the form classes of their formatives.

3.2.1. Compound Nouns

Noun + Noun > Noun

Noun + Noun compounding (Vijayavenugopal, 1979) forms the largest subgrouping of compounds. One can find in the grouping many types of semantic relationship as well as different syntactic patterns. Compound nouns can be further subclassified into four groups according to semantic criteria:

1. Endocentric compounds,
2. Appositional compounds
3. Exocentric compounds or bahuvriihi compound
4. Copulative compound or dvandva compound

Endocentric compounds are more productive as compared to other types of compounds.

Endocentric Compounds

When the compound formed is the hyponym of the head element, it is called endocentric compound. As maampalam 'mango fruit' is a kind of pazham 'fruit', it is an endocentric compound. The

endocentric compound can be formed out of two common nouns, or two proper nouns or a common noun and a proper noun.

Common Noun + Common Noun

This appears to be more productive among noun compounding. This kind of compounding is used widely in newspapers, magazines and dictionaries. Many ranges of semantic relationships can hold between the elements undergoing this kind of compounding. This can be understood from the following examples.

tirai 'curtain' + paTam 'picture > tiraippaTam 'cinema'
pakal 'day' + kanavu 'dream' > pakalkanavu 'day dream'
manam 'mind' + caaTci 'evidence' > manacaaTci 'conscience'.

Proper Noun + Noun

This type of word-formation is widely used in modern Tamil. Mainly names of places and people are used for compounding. Some compounds of this type, particularly those containing place names, show the same semantic relationships between the elements as compounds with two common nouns. For example, tancjaavuur irayil ndilaiyam 'Thanjavur railway station' shows a locative relationship parallel to ndakarappuunkaa 'town park'. Whereas in compounds such as periyaar maavaTTam 'Periyar district' where the name of people is used as proper noun, this kind of relationship does not hold good as the entities are named after a person.

Appositional Compound

Compound which is the hyponym of both its elements is an appositional compound.

veelaikkaari 'female servant' + peN 'girl' > veelaikkaarippeN 'servant girl'

In Modern Tamil appositional compounds of the following are widely used.

TaakTar 'doctor' + ammaa 'lady' > TaakTarammaa 'lady doctor'
vakkiil 'advocate' + ammaa 'lady' > vakkiilammaa 'lady advocate'

Though we may be tempted to consider compounds such as peNTaakTar 'lady doctor/female doctor' and peNvakkiil 'lady advocate/female advocate' as appositional compounds, the availability of forms such as peN kuzhandtai 'female child' prevents us from doing so.

Exocentric Compounds

If a compound is not a hyponym of both the elements of the compound, but of an unknown head, then such a compound is called an exocentric compound.

maram 'wood + maNTai 'head' > maramaNTai 'fool'
kaal 'leg' +ndaTai 'walk' > kaalndaTai 'cattle'

This does not appear to be a productive formation, thought many established or lexicalized forms are available.

Copulative Compounds

In a copulative compound it is not clear which of the elements combined is the grammatical head; the compound is not a hyponym of the elements combined; the elements name separate entities which get combined to form the entity denoted by the compound.

appaa 'father + ammaa 'mother > appaa ammaa 'parents'
aNan 'elder brother' + tampi 'younger brother' > aNantampi 'brother'

In certain compounds the final element carries the plural marker.

aaTu 'goat' + maaTukal 'common name for cow, ox and baffalo' > aaTumaaTukal 'cattle'
meejai 'table', naarkaalikal 'chairs' > meejainaarkaalikal 'furniture'

This type of compounding is not very productive.

Verb + Noun > Noun

Verb + Noun compound of the type kuTitaNiir 'drinking water' in which the first element is considered as a verb root (kuTi 'drink') and the second element a noun (taNiir 'water') is productive in

Modern Tamil. The traditional grammars treat it as relative participle based compound in which the tense suffix and the relative participle suffix are dropped. Thus, for example, kuTitaNiir is considered as a sum of three tensed forms, kuTittaataNiir 'the water which was dunk', kuTikkirataNiir 'the water being drunk' and kuTikkum taNiir 'the water which will be drunk'. The head nound of this compound can be considered to be in subject relation with the verb or object relation with the verb and other semantic relations.

cuTu 'become hot' + taNiir > cuTutaNiir 'hot water'
kuTi 'drink' + taNNiir > kuTitaNiir 'drinking water'
toTu 'touch' + uNarvu 'sense' > toTu uNarvu 'sense of touch'

These compounds can also be classified as endocentric compounds and exocentric compounds.

cuTu taNNiir 'hot water' (endocentric)
tuungku 'sleep' + muunjci 'face' > tuungku muunjci 'one who is slothful' (exocentric)

Noun + Verb > Noun

This type of compound formation is very rare. Compounds like the following can be given as examples.

taali 'weeding-badge' + kaTTu 'tie' > taalikaTTu 'ceremony of tying the wedding-badge'

Verb + Verb > Noun

This kind of compound formation is not frequent in Tamil. The following formation can be considered as examples of this kind of compounding.

aTi 'beat' + 'catch' > aTipiTi 'scuffle'
izhu 'pull' + vali 'pull' > izhuvali 'state of uncertainty'

Adjective + Noun > Noun

Though combinations such as the following can be shown as examples of this type of formation.

cinna 'small' + viiTu 'house' + cinnaviiTu 'house set up with a mistress',
maRu 'alternative' + maNam 'life' > maRumaNam 'remarriage',
punar 're- + vaalvu > punarvaalvu 'rehabilitation', pun 'diminutive' + cirippu 'laugh' >punciripppu 'smile'

One may wonder whether to consider them as compounds or noun phrases. If we define a compound as a combination of two elements the meaning of which can be understood only from an expanded form, probably the above examples can be considered as compounds. Traditional grammars treat this kind of compounds as contracted forms of N + N combination.

ndanmai 'goodness' + koTai 'gift > ndankoTai 'donation'
perumai 'largeness' + paampu 'snake' > perumpaampu 'python'
cirumai 'smallness' + ceemippu 'savings' ciruceemippu 'small savings'

But we can consider forms such as nan, perum and ciRu as adjectives which are bound in nature. Probably because of the bound nature of these adjectives we have to consider the words formed by prefixing them with nouns as compounds.

Particle + Noun > Noun

The elements such as mun 'front' and pin 'back' which the traditional grammars treat as iTaiccol 'a part of speech of elements which do not have lexical meaning', combine with nouns to form nominal compounds.

mun 'front', urai 'speech' > munnurai 'introduction'
pin 'back', kaalam 'time' > piRkaalam 'future'

Elements like mun and pin can be considered as nouns or adverbs or adjectives according to their collocation with other words in sentences.

Phrase Compounds

An entire phrase seems to be involved in this type of formation of a new word. One may doubt in some cases whether to consider these forms as compounds or lexicalization of syntactic structures. Here

we can distinguish the compounds as endocentric, exocentric and copulative.

Endocentric compound

vaanam paartta 'that which saw sky' + puumi 'land' > 'land which depends on rain for cultivation',
kalandtu 'having got together' + uraiyaaTal 'conversation' > kalandturaiyaaTal 'discussion'

Exocentric compounds

toTTaal 'if touched' + curngki 'that which shrinks' > toTTaal curungki 'touch-me-not plant'

Copulative compound

ndiirum nderuppum 'water and fire' ndakamum cataiyum 'nail and flesh'

The copulative constructions under this type differ from true copulative constructions including the clitic -um and these formations look like syntactic phrases rather than compounds when compared with other types of copulative compounds.

There are compounds of this type in which the phrasal nature can be understood by analysis.

paaRai 'rock' + aam 'that which is' + kal 'stone'> paaRaangkal 'block of stone/large piece of rock'
pul 'grass' + aam 'that which is'+ kuzhal 'tube'> pullaangkuzhal 'flute'

This kind of formation is not productive. In some phrasal compounds the case suffixes are not dropped.

pazhikku 'revenge_ DAT + pazhi 'revenge' > palikkuppali 'revenge'
aayirattil 'in thousand', + oruvan 'one man' > aayirattil oruvan 'one among thousand/greatman').

Reduplicative Compound Nouns

One of the productive processes of the formation of a compound is reduplication in which a noun and a partially reduplicated form of the same root are juxtaposed. The reduplicated form differs from the basic form by replacing the first syllable of the latter by ki- (if the original has a short vowel) or kii- (if the original vowel is lone).

puli kili 'tiger and other wild animals', paampu kiimpu 'snake and other reptiles'.

3.2.2. Compound Verbs

Compound verbs in Tamil are mainly of two types:

1. noun + verb compounds
2. verb + verb compounds

Noun + Verb > Verb

This is a productive way of forming new verbs in Tamil. Not all verbs follow a noun to form this type of a compound. Only a selected number of verbs such as aTai 'become/reach', aaTu 'perform' cey 'do', paTu 'experience' etc. are involved in this formation.

ndaacam 'destruction + aTai > ndaacam aTai 'be destroyed'
poor 'war' + aaTu > pooraaTu 'struggle'
vicaaraNai 'investigation' + cey > vicaaraNai cey 'investigate'
payam 'fear' + paTu > payappaTu 'be afraid of'

Verb + Verb > Verb

In this type of compound, the first verb, called the polar verb, is important from the point of view of meaning. The polar verb could be in root form, past participle form or infinitive form.

Verb stem + Verb

oppu 'consent', + koL 'take' > oppukkoL 'accept'
paRi 'snatch' + koTu 'give' > paRikoTu 'be robbed off'

Past participle form + verb

colli 'having said' + koTu 'give' > collikkoTu 'teach'
kaNTu 'having seen' + piTi 'catch' > kaNTupiTi 'find out'

Infinitive form + verb

aaru 'is cool' + pooTu 'drop' aarappootu 'defer'
caaka 'to die' + aTi 'beat' > caakaTi 'cause to die'

These compound verbs can also be seen as endocentric compounds and exocentric compounds.

Endocentric compounds

kaTTi 'having tied' + puraL 'roll' > kaTTippuraL 'roll over'

Exocentric compounds

tuuki 'having lifted + aTi 'beat' > tuukkiyaTi 'excel'

A selected number of verbs known as auxiliary verbs combine with verbs in adverbial participles or infinitives to add aspectual and/or modal meaning to the polar verb. It is not quite clear whether to take the preceding or following verb as the head verb. This type of compounding is crucial to the verb system in Tamil.

ooTi 'having run' + koNTu 'having taken' + irukkiraan 'is-he' > ooTikkoNTirukkiraan 'is running'

Adjective + Verb > Verb

Compounds such as the following can be shown as examples of this type of formation which is not productive.

pun 'diminutive' + ndakai 'laugh'> punnakai 'smile'
punar 'alternative' + amai 'make' > punaramai 'renovate'

But it should be noted that pun and punar which are adjectives in compound nouns such as punnakai (pun 'diminutive' + ndakai 'laugh') 'smile' and punar amaippu (punar 'alternative' + amaippu 'creation') 'renovation' sever as adverbs in the above-mentioned compound verbs.

Particle + Verb > Verb

The particle such as mun 'front', pin 'back' and veLi 'outside' combine with certain verbs forming compound verbs.

mun + eeRu 'climb' > munneeRu 'advance'
pin + parru 'hold' > pinpaRRu 'follow'
veLi + iTu 'put' > veLiyiTu 'release/publish'

This is also not a productive way of forming compound verbs. It should be noted here that mun, pin, veli, etc. can be considered as nouns as well as adverbs.

3.2.3. Compound Adjectives

It is not very clear what type of constructions will go under this category. The following are some of the instances.

Noun + Adjective > Adjective

There are mainly three sub-types in this category. The first type of adjective compound are noun + noun compounds with their head nouns suffixed with adjective suffixes such as aana and uLLa.

talai 'head' + kunivu + aana 'being' > talaikunivaana 'disgraceful'

The second type of adjective compounds are noun + verb compounds in which the verbs are inflected for adjectival participle.

kaN 'eye' + kaNTa 'that which saw'> kaNaNTa 'efficacious'

The third type of adjective compounds are noun + noun compounds in which the head nouns could be considered adjectives by collocation.

irattam 'blood' + civappu 'red' > irattaccivappu 'blood red'.

Adjective + Adjective > Adjective

Compounds like the following stand as a rare instance of this type of compounding.

pazham 'old' + perum 'large'> pazhamperum 'seasoned' as found in phrases such as pazhamperum araciyalvaati 'seasoned politician'

The adjective + noun compounds in which the head nouns being considered as adjectives could be shown as other examples.

karu 'black' + ndiilam 'blue'> karundiilam 'blackish blue'
iLam 'light' + civappu 'red' > ilancivappu 'light red'.

Noun + Noun > Adjective

As we noted earlier under 1.3.1. the third type of noun + adjective compounds are basically noun + noun compounds.

Verb + Noun > Adjective

The following verb + noun compounds could be considered as adjective compounds as the meaning of these compounds is hyponymous with some unexpressed heads which could denote qualities.

tuunkumuunci (tuunku 'sleep + muunci 'face') 'dull' as found in phrases like tuunkmunci vaatiyaar 'dull teacher',
alumuunci (alu 'cry + muunci 'face') 'sulky' as found in phrases such as alumuunci paiyan 'sulky boy'.

Adjective + Noun > Adjective

Compounds such as the following could be considered with hesitation as examples of this type of compounding.

pacum 'fresh' + pon 'god' > pacumpon 'pure' as found in phrases like pacumpon ullam 'pure heart'
karum 'black' + kal 'rock' > karunkal ('hard' as found in phrases like karunkal manacu 'stone like/hard/heart'.

Traditional grammars consider compounds like karunkal manacu as uvamaittokai 'compound in which comparison is involved' considering them as contracted form of comparative constructions, say kurunkal poonra manacu 'black stone like heart' in this case, by the elision of the comparative particle poonra. As the whole noun

phrase appears as a compound it is difficult to consider the part of it (Adjective + noun) as a compound adjective.

Particle + Noun > Adjective

Compounds such as the following could be considered as examples of this type of formation.

mun 'front' + pookku 'course' > muRpookku 'progresive' (as found in phrases such as murpookku eNam 'progressive thinking')

Traditional grammars may consider this phrase as paNputtokai 'compound of quality' with the contention that it is a contracted form of murpookkaana eNam 'progressive thinking' by the elision of the comparative particle aana. As the whole noun phrase looks like a compound it is difficult to consider the part of it (particle + noun) as a compound adjective.

Noun + Verb > Adjective

Typical compounds of this type are rare.

maNpu 'honour' + miku 'increase' > maaNpumiku 'honourable', arul 'mercy' + miku 'increase' > arulmiku 'merciful').

The exocentric compounds such as the following can could be shown as other rare instances.

kuuppu 'call' + itu 'put' > kuuppiTu 'call' > kuuppiTu (as found in phrases such as kuuppiTu tuuram 'hailing distance')
kal 'stone' + eRi 'throw' > kalleRi (as found in phrases such as kalleRituuram 'a stone's throw/very close distance')

Verb + Verb > Adjective

The exocentric compounds such as the following are the rare instances of this type of compounding.

eTu 'take' + piTi 'catch' eTupiTi 'petty' (as found in the phrases eTupiTi veelai 'mean job')
uruTTu 'roll' + puraTTu 'turn' > uruTTuppuraTTu 'fradulent' (as

found in the phrases and uruTTuppiraTTu veelai 'fraudulent means')

3.2.4. Compound Adverbs

There are mainly three types of adverbial compounds:

1. Compound nouns in which the adverbial suffixes are added (see 3.4.2. for details).

oree 'the only' + aTi 'step' + aaka > oreeyaTiyaaka 'excessively'
payam 'fear' + pakti 'devotion' + oTu > 'payapaktiyooTu 'humbly'.

2. Compounds in which the heads are adverbial participle or infinitive forms

poTi 'powder' + vaittu 'having kept' > paTivaittu 'insinuatingly'
kaN 'eye' + maN 'sand' + teriyaamal > kaNmaNteriyaamal 'having not been seen') 'recklessly',
muukku 'nose' + muuTTa 'to fill' > muukkumuuTTa 'to one's fill'.

3. Rhyme motivated compounds (see 1.5. for details).

arakkapparakka 'hurriedly'
cuTaccuTa 'right from the over/hot'.

Rhyme-motivated Compounds

There are compounds which are formed by two elements, the combination of which is motivated by rhyme. Sometimes both the elements have independent existence.

aara + amara > aara amara 'leisurely'

Sometimes one of the elements may not have independent existence.

eeTTikku > pooTTi > eeTTikkuppooTTi 'rivalry' (eeTTikku does not have independent existence)

In some cases both the elements do not have independent existence.

arakka + parakka > arakka parakka 'hurriedly'

There are cases which are simply reduplication of independently existing elements.

pooka + pooka > pookapooka 'in course of time'

In some cases it is mere reduplication of elements which do not exist independently.

paTapaTappu 'excitement'

The compounds which could be considered as nouns are suffixed by adverbializers such as -aay, -aaka, -enRu and -ena forming adverbial compounds or by adjectivalizers such as -aana.

teLLatteLivaaka 'very clearly'
puTapaTavenRu 'excitingly/speedily'
teLLatteLivaana 'very clear'
paTapaTappaana 'fast/excited'

3.3. Prefixation

Prefixation is not a productive process of word -formation in Tamil. Prefixes are found in certain words borrowed from Sanskrit.

a + cuttam 'cleanliness' > acuttam 'uncleanliness'
a + caataaraNam 'simple' > accaataaraNam 'special'

3.4. Suffixation

This process is widely used in Tamil. Here the derivation by suffixation is classified based on the form classes of the resultant word forms.

3.4.1. Derivation of Nouns

3.4.1.1. Nouns from Nouns

Many suffixes are used for the formation of nouns from nouns. Some of them productive and some are non-productive. A good

number of nouns carries gender number suffix. But the root to which they are attached appears to be bound.

*maaN + avan > maaNavan 'male student'
*maaN + vi > maaNavi 'female student'
*maaN + avar > maaNavar 'student'
*pula + avan > pulavan 'male poet'
*pula + avar > pulavar 'poet'

Probably we have to take the roots such as maaN and pula as deduced from the nouns maaNpu and pulamai respctively. The suffix set kaaran, kaari, kaarar is a productive suffix which form a number of human nouns form non-human nouns.

veelai 'work' + kaaran > veelaikkaaran 'male servant'
veelai 'work' kaari > veelaikkaari 'female servant'
veelai 'work' + kaaran > veelaikkaarar 'servant'

3.4.1.2. Nouns from Verbs

The formation nouns from verbs is a productive process. There are number of suffixes involved in the formation of nouns from verbs. Based on the type of stem to which the suffixes are added to form nouns, the derivation can be classified into to two types:

1. Formation nouns from non-relativized verb stems
2. Formation of nouns form relativized verb stems

3.4.1.2.1. Nouns from non-relativized verb stems

The uninflected verb stems, i.e. the verb stems not inflected for past/negative + relative participle is taken as non-relativized verb stems. The formation of nouns from these verb stems can s can readily be divided into non-productive and productive. Non-productive suffixes are widely used in written language than in the spoken language. These suffixes include -kai, -kkai, -vu, -ppu, kku, -al, -ccal, -ccu, -cci, -it, -vi, -i, -ai, -vai, -mai, -am, -tam -ttam. These suffixes cannot be added to all verb. A set of suffixes takes only to a set of verbs.

vaazh 'live' + vu > vaazhvu 'life'
paTi 'study' + ppu > paTippu 'education'.

The suffixes tal ~ ttal, al ~kal~ kkkal and kai ~ kkai are productive deverbal nominative suffixes which can be added to any verb.

cey + tal > ceytal 'doing',
cey 'do' + al > ceyyal 'doing'
cey 'do' + kai > ceykai 'doing',

The deverbal nouns of productive suffixation differ from the other deverbal nouns of non productive suffixation semantically and functionally (Paramasivam, 1971).

3.4.1.2.2. Nouns from relativized Verb Stems

The gerundival -atu and pronominalizers avan, avaL, avar, atu, avai can be added to relativized verb stems to form gerundival and pronominzlized nouns respectively. These suffixes are productive. The morphological formation can be depicted as follows:

verb + tense/negative marker + relative paticiple marker + gerundivalizer/pronominlizer

cay-t-a + atu > ceytatu 'that which was done'
cey-kiR-a + atu > ceykiRatu 'that which was done'
cey-v-a + atu cey-v-atu 'that which will be done'
cey-aata + atu > ceyy-aat-atu 'that which was/is/will be not done'.

cey-t-a + avan > ceytavan 'male person who did'
cey-kiR-a + avan > ceykiRavan 'male person who does'
cey-p-a + avan > ceypavan 'male person who will do'

3.4.1.3. Nouns from Adjectives

Adjectival nouns are formed by adding third person pronominal suffixes to adjectives. Derivation is equally possible both from simple adjective and from the more common derived type (3.3.1). Any restrictions on productivity are of a semantic nature.

ndalla + avan > ndallavan 'a good male person'
ndalla + avaL > ndallavaL 'a good female person'
ndalla + avar > ndallavar 'good persons'
ndalla + atu > ndalla-tu 'a good thing'
ndalla + avai > ndallav-ai 'good things'.

3.4.2. Derivation of Verbs

3.4.2.1. Verbs from Nouns

The formation of verbs from noun is not a productive process. There are a few nouns borrowed from Sanskrit verbs by a deletion of final syllable and addition of -i.

vicaaraNai 'enquiry' + i > vicaari 'enquire', aarampam 'beginnin' + i > aarampi 'begin'.

A few modern writers are trying to use nouns as verbs. But as they do not become popular, they are dropped from the usage.

uyir 'life + i > uyiri 'get life'

3.4.2.2. Verbs from Verbs

Some transitive verbs which can be paired with intransitive verbs can be said to have derived from their respective intrnasitive verbs by suffixation. Similarly some causative verbs can be said to have derived from their respective non-causative verbs by suffixation. Such processes are no longer productive. The suffixation involves three kinds of processes: 1) addition of suffix, 2) Change of phoneme and 3) Selection of different tense suffix (Kothandaraman 1977, Chitraputhiran 1982, Agesthialingam 1982:106-126). The second and the third kinds of processes can be considered as suffixation by positing an abstract morphophonemic suffix, say x, which triggers the derivation.

The suffixes -pi, -vi, -ku, -cu, -Tu, -tu, -pu and -Ru added to a certain group of verbs complementarily form derived nouns.

uN 'eat' + pi > uNpi 'cause to eat'
paTi 'study' + pi > paTippi 'educate'
poo 'go' + ku > pookku 'remove'
paay 'flow' + cu > paayccu 'cause to flow'
ndaTa 'walk' + tu > ndaTattu 'cause to walk'
ezhu 'wake up' + pu > ezhuppu 'cause to wake up'
akal 'leave + Ru > akaRRu 'remove'.

Certain verbs are derived by the doubling of the consonant of the final syllable.

aaku 'become' > aakku 'prepare', ooTu 'run' > ooTTu 'drive', maaru 'change' > maaRRu 'cause to change'.

Certain verbs are derived from the verb stems by the denasalization of the nasal consonant of the final syllable.

tirundtu 'be reformed' > tiruttu 'correct'

Certain verbs are derived by the selection of a different tense suffix.

ceer-ndt-aan 'joined-he' > ceer-tt-aan 'cause to join-he'
ceey-kiR-aan 'joins-he' > ceer-kkiR-aan 'cause to join-he'
ceer-v-aan 'will join-he' > ceer-pp>aan 'will cause to join'

3.4.3. Derivation of Adjectives

3.4.3.1. Adjectives from Nouns

Adjectives are derived widely from nouns. Bound forms such as -aana (The relative participle form of the verb as 'become') and uLLa (from the verb uNTu 'be') combine with nouns to form adjectives.

azhaku 'beauty' + aana > alakkaana 'beautiful',
azhaku + uLLa > azhakuLLa 'beautiful'.

The suffixes -aam and aavatu are added to the numeral nouns to form adjectives.

onRu + aam > onRaam 'first'
onRu + aavatu > onRaavatu 'first'.

3.4.4. Derivation of Adverbs

The derivation of adverbs can be discussed under two headings: (1) non-productive formation and (2) productive formation.

3.4.4.1. Non-productive Formation

A number of uninflected and inflected noun and verb forms are syntactically reanalysed to a closed set of adverbs (Lehmann 1989:136). Adverbs such as mella 'slowly', ndangku 'well', miiNTum 'again', iniyum 'again', innum 'still', aTikkaTi 'frequently', marupatiyum 'again' can be analysed as given below:

Verb + relative participle suffix
mella < mel 'soft' + a
ndanku < ndan 'good' + ku
Verb + past participle suffix + clitic
miiNTum < miiL 'bring back' + NTu + um
Noun + clitic
iniyum < ini 'moment' + um 'in moment' + um
Noun + dative suffix + noun
aTi step + ku + aTi 'step'.

As these formations are not productive and the adverbs are lexicalized as unanalysable units and as such listed in the lexicon, it is unfruitful to consider these adverbs as derivations.

Adverbs from Nouns

Clitic ee and case suffixes il and aal when suffixes with certain restricted set of nouns denoting different dimensions of location function as adverbs. The following types can be listed:

1. A restricted set of nouns which could be considered as particles suffixed by the clitic -ee function as adverbs.

mun 'anteriority' + ee > muunnee 'in front',
pin 'posteriority' ee > pinnee 'behind'
meel 'superiority' ee > meelee 'above'
veLi 'exteriority' + ee > veliyee 'outside'
uL 'interiority' + ee > uLLee inside'

2. Another restricted set of nouns are suffixed by the locative marker -il function as adverbs

iTai 'centre' + il > iTaiyil 'in between'
etir 'that which is opposite' + il > etiril 'opposite'
ndaTu 'centre' + il > ndaTuvil 'at the centre'

3. The case suffix -aal suffixed to certain nouns

mun + aal > munnaal infront'
pin + aal > pinnaal 'behind'

4. The names of directions suffixed by the clitic -ee function as adverbs

kizhakku 'east' + ee > kizhakkee 'east'
meeRku 'west' + ee > meeRkee 'west'
vaTakku 'north' + ee > vaTakkee 'north'
teRku 'south' + ee > teRkee 'south

Adverbs from Verbs

Past participle forms of certain verbs function as adverbs.

pindtu 'be behind' + i > pindti 'after'
mundtu 'precede' + i > mundti 'before', viraintu
virai 'move fast' + ndtu > viraindtu 'fast').

Adverbs from Bound Demonstrative and Interrogative Determiners

The bound demonstrative and interrogative determiners i-, a- and e- combine with a restricted set nouns to form adverbs.

i + paTi > ippaTi 'this way'
a + paTi 'way> appaTi 'that way'
e + paTi > eppaTi 'which way/how'
i + pootu > ippootu 'this time/now'
a + pootu 'time' + appaootu 'that time/then'
e + pootu > eppootu 'which time/when'

i-, a- and e- combine with bound form of place -ngku and bound form of time -nRu forming adverbs such as ingku 'here', angku 'there' engku 'where', inRu 'today', anRu 'that day' and enRu 'which day' respectively.

3.2.4. Productive Formation:Adverbs from Nouns

The bound forms aaka and aay, which are infinitive and verbal participal forms of the verb aaku 'become' are added to the nouns to form adverbs which is a productive process.

azhaku 'beauty' + aaka > alakkaka 'beautifully'
azhaku + aay > azhakaay 'beautifully'.

3.4. Derivation of postpositions

According to Lehmann (1989:117) "All postpositions in Tamil are formally uninflected or inflected noun forms or non-finite verb forms." There is little agreement among grammarions on whether to consider a particular form as noun or postposition.

3.4.1. Postpositions from Nouns

A set of nouns when suffixed with clitic -ee or locative case suffix -il or aaka (the past participle form of the verb aaku 'become') function as postpostions.

etir 'oppoiste' + ee > etiree 'opposite'.
iTai '+ ilai > iTaiyil 'in between'.
vazhi + aaka > valiyaaka 'through'.

3.4.2. Postpostions from Verbs

Certain verbs in verbal participle form, infinitive form, conditional form suffixed with poola and negative verbal participle form function as postpositions.

kuRi 'aim' + ttu > kurittu 'about'
tavir 'avoid' + a > tavira 'except',
viTu 'leave' + a > viTa 'than'
etir 'oppose' + t + aar + poola > etirttaarpoola 'opposite'
il 'be not' + aamal > illaamal 'without'

The change in form class of an item without any corresponding change of form is conversion.

signal (noun) > signal (verb)

The exact status of conversion within word-formation is unclear. Conversion is frequently called zero derivation. Many scholars prefer to see them as matters of syntactic usage rather than as word-formation.

We have noted already that the particle like forms such as mun 'front' and pin 'back' are used as nouns, adjectives, adverbs and postpositions. A number of words are used both as post positions and adverbs.

etiree 'opposite'
kurukkee 'across'
veLiyee 'outside'

Many nouns are used as adjectives without being suffixed.

civappu 'red/redness'

Certain verbs are used as nouns without any changes in their forms.

aTi 'beat/beating'

5.Back-Formation

The formation of new lexemes by the deletion of actual or supposed affixes in longer words is found in the following examples:

editor > edit
ontraception > contracept.

Back formation is not found in Tamil. In the formation of verbs from nouns borrowed from Sanskrit we can see a sort of backformation followed by verbalization as follows:

vicaaraNai 'enquiry' > vircaar + i > vicaari 'enquire'
caatanai 'achievement' > at + i > caati 'achieve'

Clipping

The process whereby a lexeme is shortened, while still retaining the same meaning and still being a member of the same form class is referred as clipping.

mimeograph > mimeo
pornography > porn

Typical examples of clipping are not found in Tamil. In the formation of new place names from the old ones we can notice a sort of clipping.

putukkoTTai 'Puthukottai' > putukai
kooyamputtuur 'Coimbatore' > koovai
tirunelveli 'Thirunelvel' > nellai
tancaavuur 'Thanjavur' > tancai

7. Formation of Blends

A new lexeme formed from part of two (or more) other words in such a way that it cannot be analysed is called a blend.

balloon + parachute ballute,
breakfast + lunch > brunch

Blends are not found in Tamil.

8. Formation of Acronyms

A word coined by taking the initial letters of the words in a title or phrase and using them as a new word is an acronym.

Strategic Arms Limitation Talk > SALT

Formation of acronyms is very rare in Tamil. Only a few acronyms such as the following are in use.

tiraaviTa munneerra kazhakam > timuka aikiya ndaaTukaL > aindaa

Acronyms borrowed from English are in use.

yunesco 'UNESCO').

9. Word-Manufacturing

The formation of a new word with no morphological, phonological or orthographic motivation is called word-manufacturing (e.g. Kodak). This kind of word-formation is not found in Tamil.

10. Summary

Compounding and suffixation are important processes of word-formation in Tamil. Compound words are formed mostly from two or more noun stems, from a noun and a verb stem, or, in a relatively small number of cases, from other combinations. The most common type of compound word is one in which both or all constituent parts are noun stems. This type of compounding is productive. Formation of a reduplicated noun compound by the combination of a noun root and a partially reduplicated form of the same root is also productive. Compound verbs are formed mostly from a noun + verb combination. This is a productive process. In addition to it, compound verbs are formed extensively by the combination of the verbal participle form of one verb with another verb. This process cannot be considered as a productive one. Prefixation is an entirely unproductive process, though there are some pairs of words borrowed from Sanskrit which differ only in the presence of a negative - marking prefix on one member of the pair. Verbs form many abstract nouns by suffixation.

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FORMATION OF DERIVED NOUNS

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